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THE MISSISSIPPI AGRICULTURAL AND MECHANICAL COLLEGE

THE PRESIDENT'S REPORT

1913-1915

PRESIDENT WOODROW WILSON

GEORGE R. HIGHTOWER
PRESIDENT OF THE COLLEGE

Mississippi State ~~College~~ University

The

Mississippi Agricultural *and* Mechanical College

A Part of the

President's Biennial Report

1913-1915

An institution founded in eighteen seventy-eight, and devoted to educational and industrial development in Mississippi

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THE STEPHEN D. LEE MEMORIAL CHAPEL

History and Progress

The Mississippi Agricultural and Mechanical College entered formally upon its career in the fall of eighteen seventy-eight. Like that of many business and other educational institutions, its beginning was comparatively modest. Its founders had no adequate idea of the extent of the educational reforms which were to follow the development of the ideal in mind when this and similar institutions for vocational training were made a part of the national educational system. The College itself is still young—very young when measured by the lives of many seats of learning—but it has witnessed almost a revolution in educational affairs. Those who know best its purpose and feel most its dominating spirit, and who read aright the tendencies that are giving direction to educational development in later years, believe that its progress and influence during the last quater of a century, rapid and great as these have been, are but an indication of what is to come.

BRONZE BUST OF GENERAL STEPHEN D. LEE

THE NEW CHEMICAL LABORATORY

In its academic life the College is continually becoming broader and richer. If its development since its foundation has been rapid, it can not be said that its resources have always kept pace with ever increasing demands and responsibilities. But in a few years a small college has developed into a large polytechnic institute whose activities cover a wide range of endeavor. The basic idea in its administration has been the maintenance of an institution in harmony with the requirements of modern society. It has constantly sought to emphasize the importance of an economic basis for liberal culture. It has been necessarily a champion of vocational training. In earlier years this breaking away from the older ideals brought criticism and sometimes ridicule from conservatives who could see nothing elevating or cultural in the acquisition of useful and practical knowledge. But happily the time has come when efforts to increase the usefulness of the college career are

Development of an Ideal

THE DARDEN MEMORIAL SHAFT

ENGINEERING BUILDING

looked upon with patience, if not approval. In an important sense it may be said that the vocational idea is to be elaborated. The College wishes to hold itself in close touch and sympathy with those agencies which, taken together, make for progress and promote the public welfare.

The Useful and Practical

James Russell Lowell's statement that "A College is a place where nothing useful is studied" is totally without application to the Agricultural and Mechanical College, which ought to be a place where nothing useless is taught. Here an effort is made to connect college work with the problems and requirements of everyday life. There is nothing in the college career that ought to set it off to itself. The whole institution is founded upon the principle that scientific and industrial training is as effective in producing the thinker and man of culture as were the long years of drill in the

ACADEMIC SHADES

MONTGOMERY AGRICULTURAL HALL

languages, literature, and history that characterized the old regime. The classical ideal has been modified; it has been almost destroyed. The social conditions which permitted it are rapidly passing away. Education itself has become democratic, and there is a firm conviction that every man is entitled to the best opportunities to gain it that the state can afford.

From the Student's Viewpoint

The pursuit of useful and practical knowledge does not demand the neglect of language, literature, and the so-called humanities. These ought and do receive attention as a means to an end in education, but they are not allowed to become the only means or the sole end. More and more the student seeks to make the best use of his college days in preparing to become a producing unit in society. The practical significance of his studies is a deep concern, and he rightfully feels that his time must be spent in a way that is wholly worth while. This is a tendency that needs little encouragement from educators; it is but the persistent expression of demands growing out of the more complex relations and conditions of the day. Men-

A LANDMARK

THE NEW Y. M. C. A. BUILDING

tal development and individual efficiency are in the minds of the present-day college man, but mental development alone is not the academic goal.

The foregoing is but a suggestion of the point of view of the A. & M. College. There is nothing essentially new in it, and yet many are so thoroughly indoctrinated with the educational methods and ideals of a generation ago that it seems worth while to remind them that the college is keeping pace with the progress of industrial society. The A. & M. College, like other institutions of its kind, recognizes that it has a special mission to perform. It intends to press forward with a steady purpose and a firm conviction until that mission is being fulfilled.

The work of the College as a whole may be likened to an equilateral triangle: one side is Investigation; another is Education; and the third is Extension. Education itself rests upon research and investigation. With research it is

LOOKING DOWN THE ROAD

LABORATORIES OF ELECTRICAL AND AGRICULTURAL ENGINEERING

Coördinated Effort

coördinate. Taken together, education and research mean progress in human affairs. That the practical benefits resulting from this progress may be realized by the greatest number, there must be a means of carrying to those who can not come for it a knowledge of those things which have been found to increase the efficiency of the producer as well as those that contribute to a betterment of his home and community life. This is Extension.

There must be a definite organization, of course, for the work of the three fundamental functions of the institution. For a few years, the college concerned itself only with the instruction of the students that came to its doors. In these times, its organization was simple. Little research was undertaken, and its sphere of usefulness was restricted. Expansion came with increased facilities. In a short while the Agricultural Experiment Station was established through the munificence of the Federal Government, and organized research in agriculture began.

The Farmer Included

But the authorities soon perceived that, however well the institution might train those young men of the state who were fortunate enough to become a part of its organization, and however basic and far-reaching the practical importance of the results obtained in the investigations of its experiment station, there still remained a wide gap in its

A MODEL BARN

mission. "To benefit agriculture" it needed to broaden its influence. The farmer generally could not come to the college; a beginning was made to carry some, at least, of the benefits of the college to the farmer. This marked the be-

THE COLLEGE INFIRMARY

A LIBRARY READING ROOM

ginning of the Extension Service. The spasmodic nature of the work of the early farmers' institutes was due only to a lack of funds for a comprehensive organization. "The Institutes" were conducted by Experiment Station officers and by college instructors during the vacation months and in term time when circumstances permitted. The results of this work became apparent slowly, but interest within the institution and among the farming classes grew steadily. To-day a large organization of agricultural extension specialists is maintained. It would be difficult, we believe, to over-estimate the usefulness of this promising field of endeavor.

ON THE ROCK ROAD

THE OLD DORMITORY

It will be generally admitted that the organization which the efficient administration of the work of a large college or university requires is essentially complex. But this is not an educational institution alone: its duties do not begin, nor do they end, with the academic session; it proposes to extend its facilities in every helpful way to the industrial as well as the educational development in the state; in spirit it is, and more and more in fact it intends to become, a public service institution. There will be a tendency to expand its extension service; there must be a constant development in its educational functions; and the problems of its organization and the plans for its future will require the best thought and most conscientious service of its officers.

A Complex Organization

The academic work of the college is carried out under the direction of the several schools, each of which has its own faculty. The Director is the administrative officer and the chairman of its faculty.

A HEDGE IS ORNAMENTAL AS WELL AS USEFUL

THE NEW DORMITORY

Instruction in Agriculture and the Mechanic Arts was the basic idea in the establishment of these institutions. They became a part of the educational life of the country at a time when the development of agriculture as we know it to-day was only in its beginning. The founders themselves did not foresee the great influence which the colleges and experiment stations have exercised in the phenomenal progress in agriculture during the last thirty years. For many years this was essentially an agricultural college. There were no facilities for engineering work or instruction. It is to the lasting credit of its early administrators that the meagre resources of the college were not scattered in several directions. The development of agriculture was its central idea. To this it steadfastly held.

The School of Agriculture

Agriculture itself is composite. The natural sciences form its foundation. Its practice is becoming more and more specialized. The "Professor of Agriculture" of former years is now unknown. In his stead, there have come professors of Agronomy, of Animal Husbandry, of Dairying, of Horticulture, etc., and even these departments are sometimes subdivided and in charge of instructors devoting their entire time to some special branch or subdivision.

The Old Method and The New

The School of Agriculture has in its charge the work of the departments closely allied with the subject of agriculture as well as those giving instruction in its more important divisions mentioned above. The courses in undergraduate and in graduate work are fully outlined in the college catalogue.

A QUIET LAKE

For many years the college was unable to fulfil properly even its more important functions, which were obvious enough to its officers, but which were impossible of fulfillment for lack of resources. Its work was confined to the field of agriculture. In later years a modest beginning in instruction in engineering was undertaken. To-day the School of Engineering is training many young men. The engineer has an important mission even in a state devoted so largely to agriculture. It must be plain that industrial and economic independence can not be based safely, if at all, on agriculture alone. If agriculture is our largest industry, it ought by no means to be our only industry. Industrial progress must accompany agricultural development.

The School of Engineering

IN FRONT OF THE CHEMICAL LABORATORY

Enduring and far-reaching prosperity and national independence will require the united efforts of agriculture and industry, and the engineer is certain to take an increasingly important share in the development of our state as well as of the nation itself. A country with

LOOKING TOWARD MONTGOMERY HALL

great natural resources like our own and with men trained in all lines of agriculture and in every division of engineering may turn its face to the future with a confidence that comes with the consciousness of power. But we must not forget that natural resources without the skill to make the most of them will not bring wealth or culture or happiness to a people. The College is engaged in developing skilled men. That it is the duty of the State to use every endeavor to develop its resources in men is plain enough to require no emphasis here.

Engineering Training

The School of Engineering maintains its own organization. Its director is its administrative officer. Extended courses of instruction are provided in several great fields of Engineering, viz., mechanical, electrical, civil, and mining. The courses in engineering, like those in agriculture, are practical as well as theoretical. A seasoned engineer can not be produced by a four- or five-year college course, but a foundation may be laid and a beginning can be made. The duty of the State certainly extends as far as this. The School of Engineering has charge of all the engineering work of the college. It is a unit in the system of vocational training.

Young men who wish to become agriculturists or engineers have long found an opportunity here, but men are made in many moulds. The industries rest upon a foundation provided by the sciences. It was the scientist that blazed the trail for the industrialist. It would be an impractical and narrow educator who would devise a system wherein training in the natural sciences

The School of Science

A CAMPUS SCENE

is not fostered in every way. The civilization of the present day without the work of centuries of scientific development would not be conceivable. Notwithstanding the popular impression, research in pure science is practical; its useful applications are everywhere apparent.

Pure and Applied Science

An institute of technology and a school of science go hand in hand. It is a trite expression that science is the handmaid of invention, and it is no less obvious that invention is the handmaid of industrial progress, with which this college is so vitally concerned. In an important sense the institution itself is composed of a collection of scientists. It is eminently proper—indeed, it is imperatively necessary—that a college of this kind be pervaded with the spirit of applied science. Let us remember that the pure science of to-day is the applied science of to-morrow. We do not wish to see it become an academic parasite; it ought to be a pioneer within its special sphere. This is an ideal which will not become obscured by mistaken notions of immediate practicality.

Spirit of the Science School

The School of Science is in reality an institute of applied science. Training in the useful and practical is the spirit of the college. It will be held to its steady purpose, and no fear need be harbored anywhere that work of any kind will be undertaken at the public expense that is out of harmony with the broad purposes of the agricultural and mechanical college. The school is under the management of its own director. Its work is wholly satisfactory.

STUDENTS, YOUNG AND OLD

In the progress of human affairs, the useful preceded the cultural. In the development of academic training the cultural, in the main, preceded by many centuries the useful and practical. In the domain of education, tradition and precedent became forces that have been overcome only slowly and with difficulty by the demands of modern conditions. Now, medicine, the law, and theology no longer dominate even the most conservative universities and colleges. The agricultural and mechanical colleges have been powerful factors in producing a new order. The revision was first confined most largely to college curricula. But the college is but an extension of the high school, and the high school of the grammar school. It is not sufficient that practical training be confined to the college. Most men, as yet, are never allowed the advantages of the colleges, and even a distressingly large percentage are denied the benefits of high schools. If education is a public duty, the kind of education that will most benefit the child, the youth, and the man in living a modern life is the highest public concern. In a word, the spirit which finds expression in training in the useful and practical in college ought to extend throughout the entire educational system.

The Old Order and the New

Teachers and apostles for the new educational propaganda must be prepared. The College believes that it ought to contribute the use of its industrial and technological courses and departments to the preparation of teachers of agriculture and the mechanic arts in the schools. It seeks in this way to extend its usefulness in industrial education generally. It is not the training of a mere pedagogue with which it is concerned; it is more vitally interested in producing capable, practical men for schools giving work in agriculture and manual training. It should not and

Industrial Education

A GOOD ROADS MOVEMENT

does not intend to go farther than this. The training of teachers generally is not a function of the institution, but the making of industrial leaders is a part of its program.

The foregoing indicates the need, fixes the sphere, and defines the single purpose of the School of Industrial Education. It hopes to supply a need which we believe to be a positive one; it will be held rigidly within its sphere and steadily true to the purpose which dominates it. This School is also a unit in the educational system of the College. In organization and in administration it is similar to the Schools of Agriculture and Engineering.

The Purpose and Sphere

This is an institution which finds itself engaged primarily in vocational training. It seeks to produce a sympathetic environment wherein preparation for a definite career will find emphasis and constant encouragement. The old colleges took no part in the basic purposes of this new institution. A college career and a life career are closely related. Useless sowing in college is little better than the proverbial planting of wild oats in early life. It is too much to expect the aimless college man immediately to equip himself with the dominating purposes of a life career when the college doors are closed behind him at commencement; he will not do it; the purposeless habit will have taken possession of him. He who overcomes it is stronger than the average man. The student of the A. & M. College is encouraged on every hand to adopt a career in early life, and he is required to pursue a course that looks to this end.

Definite Aim, Fixed Purpose

There are many advantages in choosing a profession early and in preparing for it systematically. Much time may be saved, and habits of thoroughness,

A WALK THROUGH THE CAMPUS

accuracy, and industry can be so firmly formed that these will become faithful servants throughout life. In the modern college, there is scarcely a niche for the aimless student, just as the complex life of to-day holds no place for the purposeless man.

Many generations of able pedagogues for many centuries did not find it possible to reach a conclusion as to what knowledge is most worth while. The subjects selected by these early educators, when looked upon from the modern point of view, probably appear better adapted for a learned aristocracy than for an every day industrial democracy such as ours. The culture it produced had no relation to the economic basis upon which it was to rest. The cultured man of the old school, like the common individual, had need for the necessities and even luxuries which his so-called culture did not help him to earn. The tendency was toward the production of industrial parasites. The fact is there is no antagonism between the useful and the so-called cultural subjects of study. Learning and labor are complementary. They must be united for the good of both. Recent events bring us strongly to suspect that there is some relation between educational policy and economic independence. Nothing is plainer than the fact that the changed conditions of the present day demand modified preparation to meet them. The elective and prescribed courses at the A. & M. College are designed to meet in a practical way the responsibility resting upon an institution established for industrial training.

Vocational Training and Liberal Culture Not Antagonistic

The Agricultural and Mechanical College is committed to vocational training; it would bring its academic program in close touch with the complex requirements of the daily lives of men, and it sees an ideal in the college career that develops

A TOWER VIEW OF HORTICULTURAL GROUNDS

the character and ability to meet these requirements properly. It is founded upon a belief in the necessity of providing an economic basis for all culture, and it seeks to encourage individual efficiency and to train the producer. But the lives of men are not wholly occupied with scientific and practical pursuits, and the college courses are not entirely composed of scientific and industrial studies. The good citizen and practical man needs now as much as ever the benefits that come with a knowledge of government, economics, and social studies; the inspiration to be derived from the history of human accomplishments; and the pleasures and refinement that follow an appreciation of language, literature, and art.

Liberal Culture Provided

AGRONOMY

The course in Agronomy is designed to familiarize students with the principles underlying productive soils and plant growth. The soil is our greatest resource, and the maintenance of its fertility is of prime consideration. Plant, animal, and human life depend directly or indirectly upon the physical, chemical, and biological conditions found in the soil.

The application of economic business principles to crop husbandry is, then, of great importance. The fundamentals of successful soil management should be understood by every farmer. College instruction concerning soils and plants may not make a man practical—neither will the lack of it do so—but such training will give a practical man knowledge about basic agricultural facts, which will render his work more remunerative, as well as more attractive.

The work of the department of Agronomy exemplifies the fact that that instruction is best which brings the student into a close and sympathetic touch with the vital problems of life. Today people are seeking education not so much as a cultural embellishment, but as a weapon against want. There is just as much genuine culture in learning how to maintain a productive soil and to grow improved plants at a minimum cost, as there is in learning to read how the Greeks and Romans lived.

The course of instruction in this department is given to (1) the four-year students in agriculture, (2) two-year course students, (3) graduate students, (4) correspondence students in agriculture, and (5) students of the farmer's short course in agriculture. The work as outlined is embraced under the following heads: elements of agriculture, soils, soil fertility, grasses and forage crops, farm crops, first principles of agriculture, crop and soil improvement, fertilizers and legumes, plant breeding, and farm management. The work for graduate students specializing in advanced work in agronomy is outlined in detail in the annual college catalog. The free correspondence course in Agronomy, which many farmers are now taking advantage of, is outlined under the following heads: (1) soils and soil fertility, (2) grain crops, (3) preparation of the seed bed, (4) clover and grasses (5) grain crops, and (6) hays and silage crops. Special attention is called to the value of this correspondence work. This department gives its work by means of text-books and lectures, supplemented by practical demonstration in the seed and crops laboratory, soils laboratory, greenhouse, demonstration farm plats, experiment plats, and on the college farm.

The work of this department has been made thoroughly practical. It endeavors to show, and have the student work with, every type of soil and every agricultural plant studied. The aim is to prepare young men to solve the practical problems of farm life, and to fit them for educational and research work. The usefulness of this department is limited only by the funds available for the maintenance and extension of the work.

ANIMAL HUSBANDRY

If it be true that agriculture is the basis of our prosperity it is equally true that Animal Husbandry is inseparable from profitable agriculture; this is evidenced by the fact that live stock play an important part in all farming operations where lands are high in value. The reasons for this are that farm animals provide the most economical way of utilizing many farm products and at the same time of effectively building up the fertility of the soil. Important as is the sphere of the agronomist and agricultural engineer in the production of crops, it remains for the animal husbandman skillfully and scientifically to weave those crops into highly concentrated marketable products; such as, beef, mutton, pork, butter, and milk.

As a solution to the problem of keeping boys on the farm it is difficult to conceive of a better plan than to provide facilities so that the boy may help develop and care for farm animals that he is directly interested in, and this is equally true whether it be intended for him to specialize in Animal Husbandry or to engage in general farming.

Since it is impossible to teach Animal Husbandry in the class room alone, the college farm is well equipped with the leading breeds of horses, cattle, and hogs.

If the student is interested in mule breeding, which should be carried on more extensively in this state, he has the opportunity of studying this problem on the college farm with the large number of different types of mares kept for mule raising, thus demonstrating the principles laid down in the class room.

Besides representatives of the various breeds of dairy cattle there are a number of pure bred cattle of the leading beef breeds, such as, Aberdeen Angus, Shorthorn, and Herefords, and the student can see for himself what is possible in the way of grading up common or scrub cattle by the use of pure bred sires for beef purposes.

Special attention is also paid to hog raising, and such breeds as Berkshire, Poland China, Duroc Jersey, and Chester White are in evidence here, giving the student an opportunity carefully to weigh over for himself the advantages and disadvantages of these different breeds.

In view of the fact that the population of this country is increasing much faster in proportion than the supply of farm animals, with a consequent upward trend in the price of live stock products, and of the further fact that the foreign markets are hungry for such products whenever we are in a position to supply them, there is a bright future assured to the business.

With her wonderful natural advantages, excelled by none, Mississippi bids fair to become in the near future one of the leading live stock states in the union, and the prosperous farmer of the future will be the man who skillfully combines Animal Husbandry with his farm operations.

AGRICULTURAL ENGINEERING

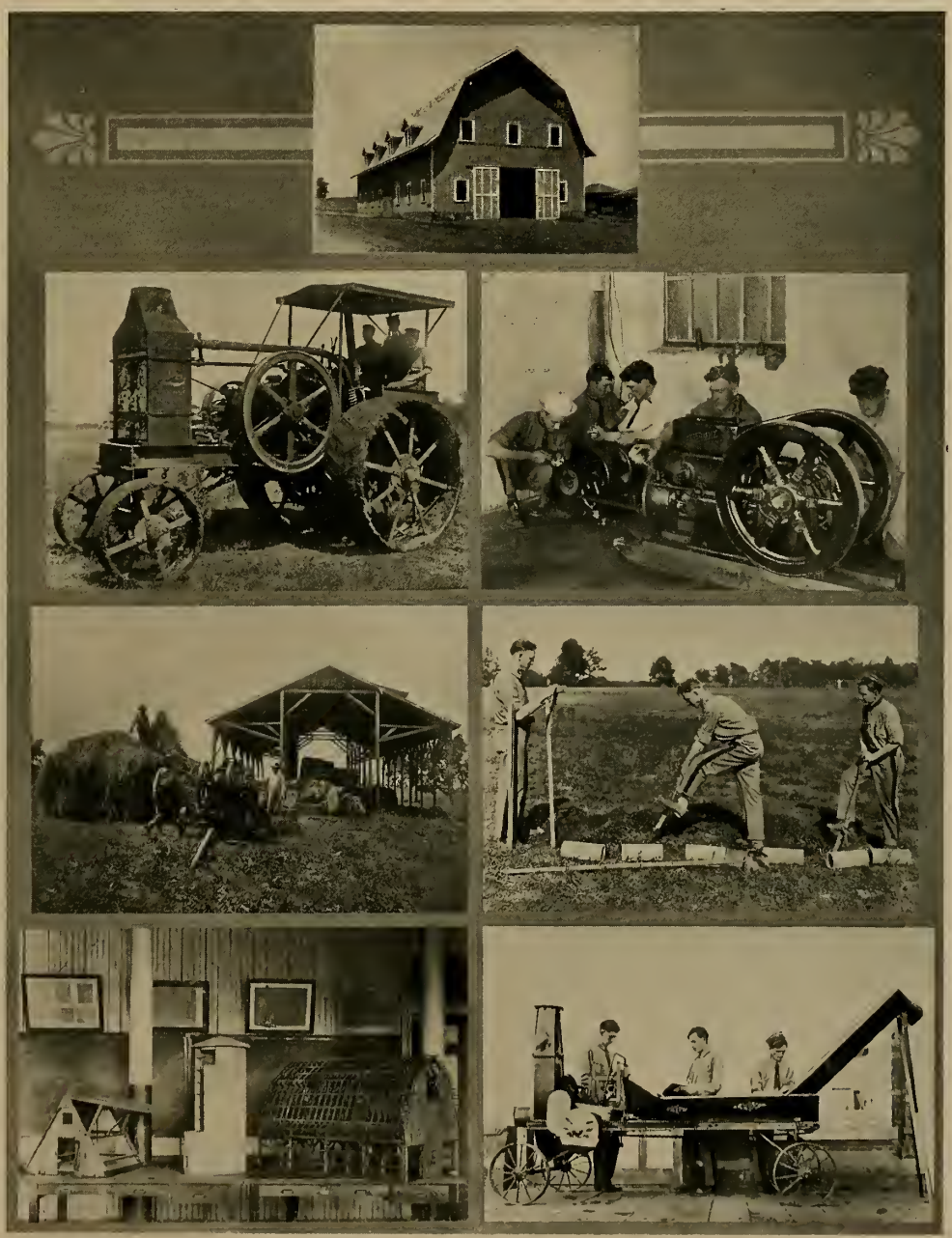
Agricultural Engineering deals with all the engineering problems that confront the farmer; such as, the location and erection of farm buildings, the selection and installation of farm motors, the use and care of farm machinery, proper methods of irrigation and drainage, rural sanitation, and the building and maintenance of good roads.

Every student in the agricultural school of the College must take work in this department before graduation. To be a thoroughly modern farmer who is to get the most out of his land he must not only know about seed, the soil, farm animals, etc., but he must also have a working knowledge of the mechanical agencies by which he is to make farming profitable and farm life enjoyable. Mississippi farmers spend $2,500,000 a year for farm machinery and $8,000,000 a year for farm buildings, and it is very important that they spend these immense sums judiciously.

The student in his first year of college work is taught how to operate the different farm machines. He is required to put on overalls, get out in the fields, and actually run the machines. Later in his college course he studies the different kinds and makes of farm implements, and how to survey the land and put in tile drains.

In coöperation with the College Extension Division, the department assists the farmers of the state with their agricultural engineering problems. Men are sent out to help build silos, to advise in the location of farm buildings, to aid in putting in tile drainage and in building terraces. Blue prints of farm buildings of desired types are sent free of charge to the farmers of the State. Through letters answering inquiries from all over the State for information and advice, the department is able to extend its usefulness to a marked degree.

The equipment, consisting of farm machinery of different types and makes, farm motors, testing apparatus, farm building models, and library, is modern and in good condition, although rather limited for present needs. It is hoped that the equipment and instruction force can be enlarged, as soon as funds are available, to keep pace with the increased number of students in the courses and the rapid growth of the extension work of the department.



BACTERIOLOGY

Bacteriology is one of the younger sciences. This year, for the first time, it is being taught in every agricultural college in the United States. In all but a few it holds the rank of a department; in a few it is still connected with botany and veterinary science.

The importance of bacteriology is seen in the relation of bacteria to every day life. The science of medicine and antiseptic surgery rests upon the knowledge of bacteriology, as do also hygiene and sanitation.

In the arts bacteria play a most important part—in butter and cheese making, in the manufacture of vinegar, the tanning of leather, the retting of flax, and the curing of tobacco.

The farmer depends almost entirely upon bacteria with legumes to increase his soil nitrogen and to transform the organic manures to soluble plant foods. The best means of growing legumes, of putting the soil in condition—liming, draining, and tiling—the kind of legumes to grow, are all problems that depend upon knowledge of bacteria for their solution. The greatest limitation to stock raising in the South is the diseases to which farm animals are subject. The prevention and cure of these depend very largely upon our science.

The sanitary engineer must take into account the science of bacteriology for his methods of installing water and sewerage systems.

As a cultural subject bacteriology is equal to any of the other sciences. The technique is of such a nature that it gives splendid mental training, and the extent of the subject reaches into practically every science. It has no superior in training one to be expert in precision and detail.

The courses given include general bacteriology, covering the technique and theory of the subject; soil bacteriology; the study of bacteria related to soils and crop production; dairy bacteriology; veterinary bacteriology; sanitary bacteriology, dealing with the bacteria in water and sewage systems; and elementary bacteriology, which deals with the bacteria related to agriculture. Students doing graduate work, undertake problems of original research.

Our equipment, though limited, is ample for good laboratory work.

BOTANY AND FORESTRY

It is the aim of this department to acquaint students with plants and the fundamental principles which govern their life processes. Courses re planned to awaken an interest in the plant world, to give some technical knowledge of plants such as is needed in a well rounded education, and to give certain training which will be helpful in growing plants on the farm or in carrying on work in the different lines of plant industry.

This department gives work to students from three of the four schools of the college; namely, the School of Agriculture, the School of General Science, and the School of Industrial Education. Naturally the student who is to go back to the farm and work with plants is given special attention.

The students of agriculture are given such work in botany and forestry as will be of the greatest importance to them in the production of plants. Stress is laid upon the structure and nature of seeds, conditions favoring germination, growth of plants, and development of flowers and fruits. Work is also given in collecting and identifying local wild plants. Instruction is given in the principles of plant physiology, plant morphology, and in the diseases of plants due to fungi, with the methods of control.

The students from the School of General Science are given more technical training in morphological, physiological, and structural botany. Theory is stressed more with them.

Industrial Education students are given a brief survey of the plant world. This is a basic course for further study of the subject, or to fit them for elementary teaching in high schools.

In addition to the required courses, we offer to advanced students several elective courses. The number taking these courses is increasing each year. We also offer work leading to the degree of Master of Science, which is arranged by consultation with the applicant.

The outlook for the department is very bright. People are beginning to realize more and more the need for information about such commonplace things as plants. We are striving to make our department reach as many people as possible, besides our students, and to be of increasing service to the people of the state. The results are encouraging, and possibilities for good in the future are unlimited.

CHEMISTRY

The science of chemistry possesses a fascinating history. The record of its accomplishments is closely linked with our industrial progress. Its aid has been sought by all of the natural sciences. The rapid development of agriculture was made possible largely through chemical researches which have contributed so much in explanation of plant and animal growth, and the subject must be considered a basic one by the student of agriculture, for its facts and principles find important application in practically all of the sciences that contribute to a broad comprehension of agriculture as we know it today.

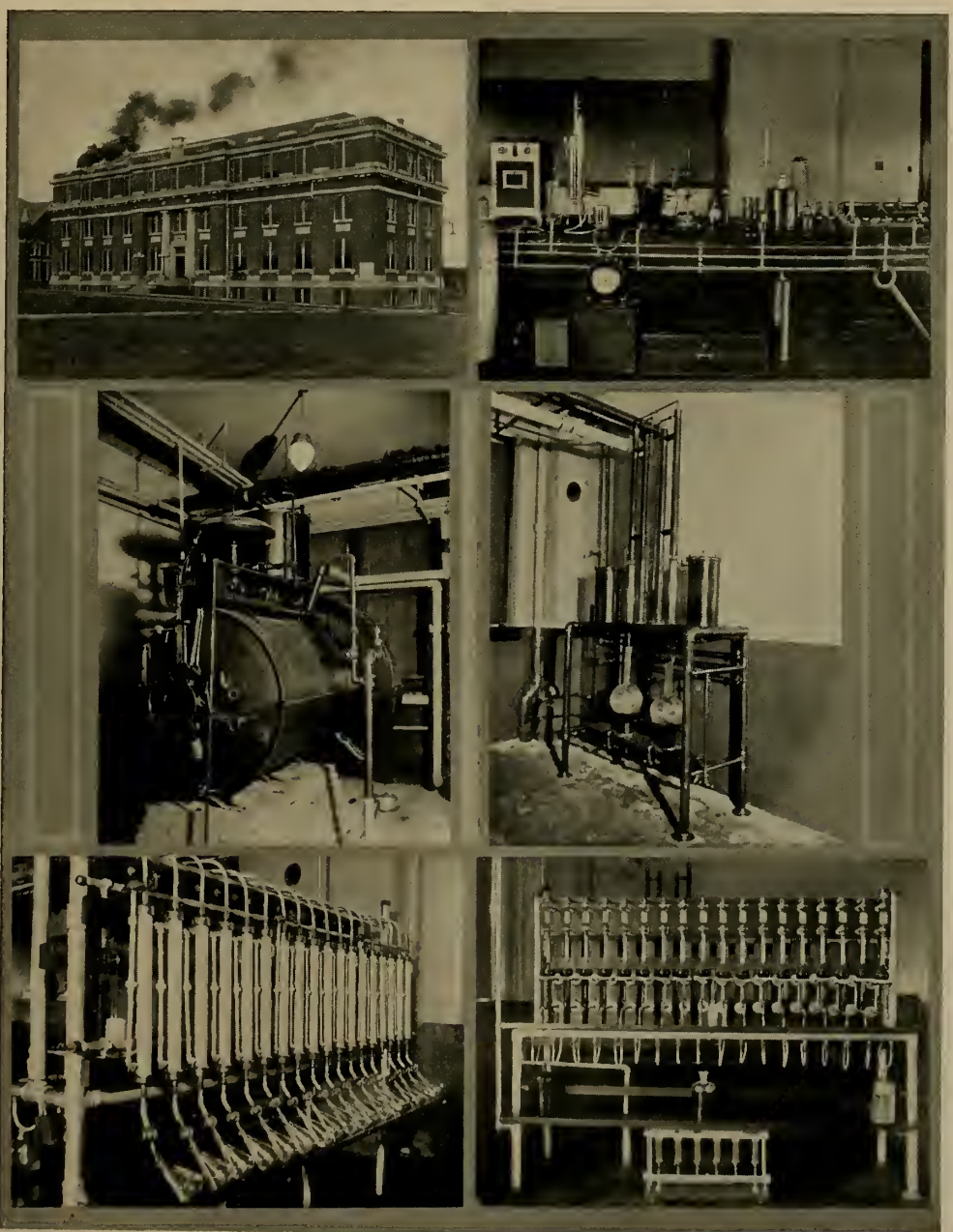
The agronomist finds his work based upon a knowledge of the chemistry of soils, fertilizers, and plant development. The animal husbandman requires at the very outset of his work a thorough understanding of the chemistry and composition of feeding stuffs, and it is not less important also that he acquaint himself with the chemistry of the metabolic processes occurring in the animal body. Chemistry is found also at the foundation of the dairy industry; it is obviously a subject of first importance in veterinary medicine; and its literature is in constant use by the zoologist, the botanist, and the geologist.

In the field of engineering, the chemist is everywhere taking a share in the rapid development that is being brought about. Scarcely an important industry can now be found that is free of chemical control. Very largely through its assistance, the empiricisms and rule-of-thumb methods that have come down to us through inheritance are being replaced by the certainties which the principles of science bring to the industries.

It is plain enough that chemistry is an aid to most industries, but it is probably not so well recognized that some very important ones have been created outright by it. It is no unusual occurrence today to see waste material converted into valuable products. Far-reaching improvements in the chemical processes of mining and manufacture are witnessed each year, and the chemical engineer of the future is certain to take a position of first importance in our industrial development.

Aside from its useful applications, the study of chemistry lends itself effectively to the broad purpose of the educator. The subject possesses a two-fold object in the college curriculum. Every college man should know something of the elementary principles of chemistry, while students of agriculture and engineering must spend more time necessarily on courses bearing directly upon their major work. The department of Chemistry has always taken a keen interest also in training young men for careers as professional chemists.

The duties of the department are not confined to instructional work alone. Its entire organization is in close sympathy with the wish of the institution as a whole to extend its facilities in every helpful way in the public service. To this end, the analytical department is constantly engaged in work of the most varied character for citizens of the state.



DAIRY DEPARTMENT

Mississippi is essentially an agricultural state. Diversification and rotation of crops are considered necessary for success in farming and for retention of soil fertility. Live stock must be kept on the farm in order to provide for a profitable use of many farm products. Dairy farming is recognized as one of the highest branches of farming and demands intelligence, training, and skill for its successful practice.

There are three systems used by the department in giving instruction: 1. Instruction to regular and short course students of the college; 2. Investigation of dairy problems and the dissemination of the truths obtained through bulletins and correspondence; 3. Demonstration and extension work.

This department has arranged its courses of study for the student so that it shall perform its part in the training of intelligent farmers and dairymen, not simply that they make a better living, but rather that they may be leaders in making agriculture in its different branches a live, progressive art, and thus provide a more satisfactory basis for thrifty, intelligent, refined, and happy communities.

The Dairy Department has under its supervision all work connected with the dairy herd, the dairy farm, and the dairy. The dairy herd contains over two hundred head of animals, nearly half of which are pure breds, and all inferior cows are being sold. The standard of the herd is being raised each year. Several Jersey cows have given six gallons each a day and one Holstein-Friesian cow has given a little over ten gallons of milk in a day. These were all bred and raised by the department. This herd has been handled on a badly worn farm of about four hundred acres, and it has made it possible so to increase the fertility of the soil that now practically every acre produces profitable crops, whereas only a few acres would do this ten years ago. This improvement of the herd and land has been paid for out of the proceeds from the herd.

The dairy building is equipped with modern appliances for handling the milk and cream from the department herd and from the herds of patrons of the Cooperative Creamery Association. Steam separators, churns, and butter-making machines are in daily operation, furnishing valuable object lessons to the students in the proper care and management of the products.

THE A. & M. COLLEGE COÖPERATIVE CREAMERY

This creamery was established for the purpose of determining whether or not such creameries would prove profitable in the State. The Dairy Department realized that if they could be made to pay, coöperative creameries would do more to develop the dairy industry of the State than any other agent.

Under the management of the Dairy Department, the cooperative creamery was started with nineteen patrons furnishing about three thousand pounds of butter fat per month. After two and one-half years, there are now over one hundred patrons supplying milk from about fifteen hundred cows. The income is between $6,000 and $7,000 per month. The results have been so satisfactory that the venture has been declared a success, and the management turned over to the Coöperative Creamery Association. The patrons bear all the expenses, no part of which is paid out of college funds.

With the success of this creamery assured, we have been able to give information that has resulted in the establishment of a number of other creameries in the State, all of which are doing well. The information secured has also made it possible for us to prevent creameries from being established where failure would almost surely result. The Dairy Department is ready to assist each of the creameries in every way possible, and will help organize others where conditions indicate that they will succeed.

HORTICULTURE

Horticulture: "The Poetry of Agriculture"
"The Art that doth mend Nature."

Horticulture: The science which treats of fruits, vegetables, and ornamental plants; the art which applies the principles involved in propagating, cultivating, and otherwise caring for garden and orchard crops and ornamental plantings.

Few, if any, subjects are so well adapted to the work of skillfully training the hand, the head, the heart. None appeals more directly to the five senses. No subject is better calculated to cultivate habits of close observation and attention to details, nor better suited to the work of increasing the power of concentrating thought and stimulating the investigating spirit.

Whether considered as a potent factor in industrial training, or in education in general, or in its relation to the practical problems in agriculture, the study of horticulture naturally demands careful study of geology, physiography, bacteriology, chemistry, botany, entomology, and other fundamental sciences in our educational system.

While agriculture, as the term is commonly used, concerns itself with extended areas usually remote from the dwelling, horticulture restricts itself to smaller areas and is more intimately associated with the home. The terms horticulture and home are inseparable. In fact, it is in the home that horticulture finds expression and its real setting. It plays a most important part in home building, not only in the country, but also in the village, the town, and the city.

The department of Horticulture offers courses in The Principles of Propagating Plants from Seeds, Cuttings, Layers, Buds, Grafts, etc.; The Home Garden; The Home Orchard; Commercial Horticulture; Beautifying School and Home Grounds; Landscape Designing; and in Research Work.

The equipment includes a laboratory, a library, greenhouses, hotbeds, cold frames, garden, nursery, orchard, ornamental grounds, etc.

Instruction is not limited to college students alone. Through correspondence, bulletins, the press, extension service, and by actual demonstrations on school and home grounds thousands of school children and grown-ups are being reached. The department expects to continue to develop; there are plans for its expansion that await only the funds for carrying them out.

MARKETS AND RURAL ECONOMICS

Had the human family always conserved its energies and avoided all waste, we would have the material for a supreme civilization, and drudgery would be unknown.

We call attention to four divisions of our work:

1. The average cost of distribution equals the average cost of production. It is one of the functions of the department of Markets and Rural Economics to help prepare the coming generation for the mastery of their work, so directed as to eliminate waste of time, money, and energy.

One phase of this division is to study the farmers' exchange.

2. Better business methods have been applied in all lines of industry more than in the distribution of farm products.

To aid in preparing the farmers of the future for better business is one of the features of this department.

Specifically comparing the farmer's business methods with the methods of the most successful of the business world is one of the features of this division: accounting, standardizing, carrying, exchanges, etc.

3. Agricultural financing is a problem yet unsolved in America. To reach efficiency in production and distribution, an adequate system of financing must be had.

To bring the study of this vital issue to the student is another task of this department. This involves the study of the rural credits and coöperative banking systems of the world.

4. Rural life as a whole is uninviting to the ambitious youths of our land who must choose their career. These youths are the country's greatest asset. If our rural citizenship is to be the reliance of the republic, as it has been in the past, we must build a rural civilization approaching their dreams of a full and complete life.

The study of rural life in all its essentials, with a view of developing the highest quality of rural citizenship, and reaching the highest social efficiency, is a large part of the work with which we are deeply concerned.

This branch involves the study of rural surveys, social centers, leadership, intellectual ideals, economic conveniences, communication, transportation, etc.

GROWN MISSISSIPPI
MEANS
KEEPING MONEY AT HOME
BETTER HOME MARKETS
ABOLISHING CREDIT SYSTEM
DEVELOPING STATE PRIDE
ADVERTISING THE STATE
WALLACES FARMER

POULTRY HUSBANDRY

The object of this department is to give instruction in this branch of live stock and to carry on experimental work with poultry. No course in agricultural training would be complete without a systematic training in poultry. One of the most important functions of agriculture is to feed the world, and no meal is complete without the use of the product of the poultry yard.

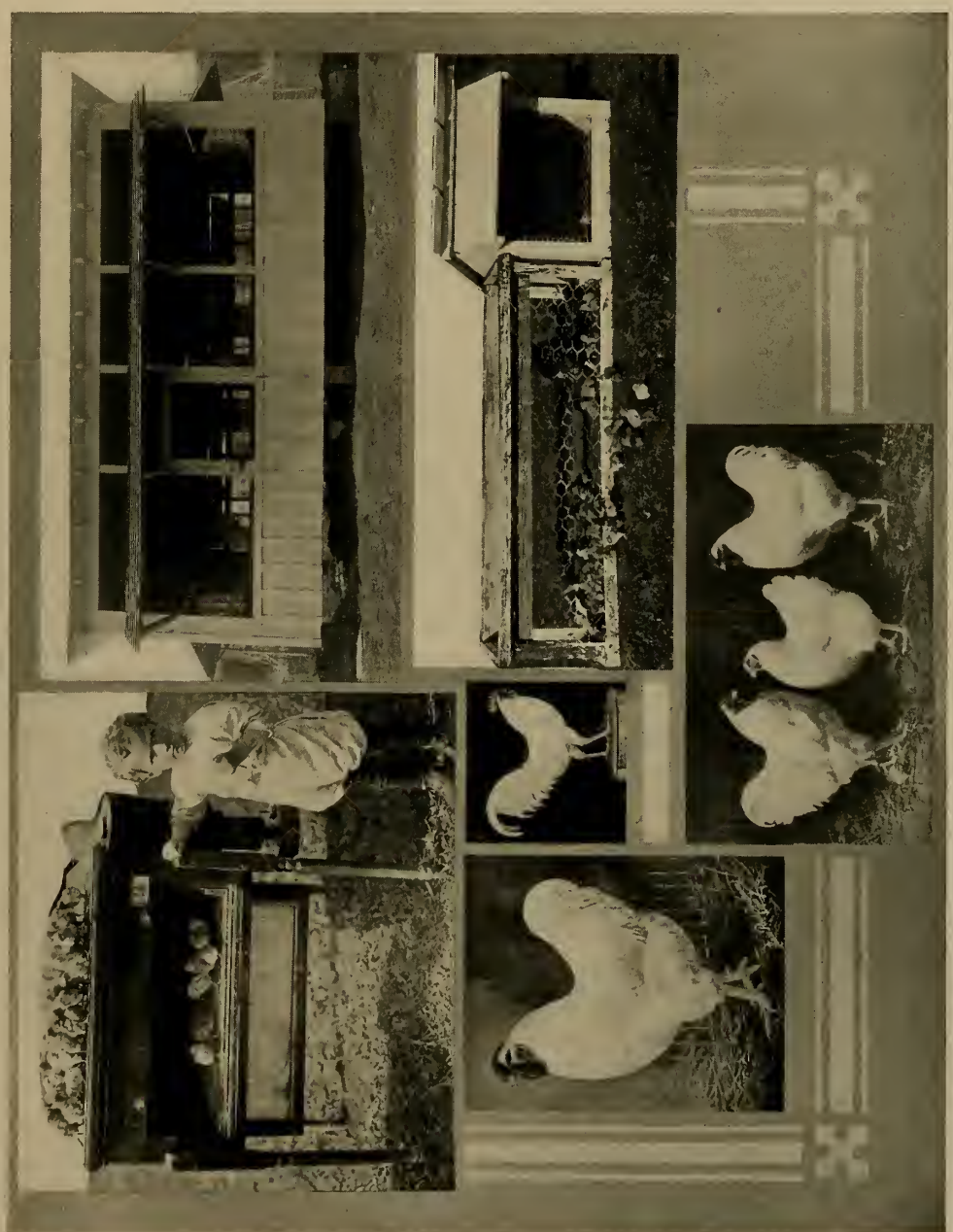
This subject correlates closely with the general farm, the dairy farm, and the truck farm. The waste from the general farm will support a flock of hens to supply the home table, while the waste milk from the dairy and the waste vegetables from the truck farm can be turned into profits through the hens. Again, the waste from the hens will enrich the soil.

The courses of instruction in this department bring out in detail and show by demonstration how this branch of live stock can be made to supply more food for the home and a surplus to add to the cash income of the farm. The first course deals with the fundamental principles on which success of farm poultry is based; the second goes into detail in breeding, incubating, brooding, feeding, and housing; and the third takes up successful marketing, based on grading and marketing what the markets want in the way they want it.

The usefulness of this department is not limited to the training given the students in college. The instructor travels hundreds of miles, and instructs thousands of people every year in the better management and more intelligent marketing of poultry and poultry products. Thousands of letters are answered each year, giving instruction helpful to the farmer.

The department is equipped with poultry houses of the latest type, coops, yards, incubators, brooders, a work shop, a feed house, and a brooder house. The stock consists of fifteen breeds and varieties of chickens, ducks, geese, and turkeys.

The usefulness of the department is growing rapidly. From the increased interest manifested by the students and from the inquiries received from farmers over Mississippi, we assume that this department will render far more service in the future than it has given in the past.



VETERINARY SCIENCE

Veterinary medicine is taught as a part of the course offered in the School of Agriculture. It consists of theoretical and practical work of use to the stockman in preventing contagious and infectious diseases, and in nursing animals suffering from diseases or from accident.

The work of this department correlates with nearly every department in the Agricultural School, in as much as it is necessary to grow proper foods, recognize poisonous plants and insect pests, diagnose diseases of animals, make use of bacteriological aid to determine the nature of the disease, and the chemist must assist in determining mineral and vegetable poisons.

It is necessary that people should understand the selection and practical use of healthy animals, and also the means of keeping them healthy and productive, and this education is one of the essential features in connection with our work here.

While instructional work is very essential in a course of this kind, special attention is paid at all times to the practical part of the work, and young men taking this course are required to apply the knowledge that they secure in the class room to actual work on the farm.

Students are instructed specially in the vaccination of hogs against cholera, and also in preventive measures against other diseases of live stock.

Any intelligent and cultured man will appreciate the necessity of general, sanitary, and other measures adopted to keep animals healthy, and while it is not the special aim to make specialists in this line of work, yet the instruction that students receive here enables them to handle diseases of animals intelligently and to know when to secure expert assistance.

Several courses of one term each are offered to agricultural men that have had the preliminary or required training to follow the work. Some of these courses are electives. It is always a pleasure to give special instruction to those wishing to secure knowledge along certain lines. There is an exceptionally good building and equipment provided for the work.

The future of the department of Veterinary Science is brighter now than it has been at any time in the history of the college, for the reason that the people of this commonwealth are turning their attention to raising live stock, and the health of the animals is very necessary to the success of the prospective breeder.

ZOÖLOGY AND ENTOMOLOGY

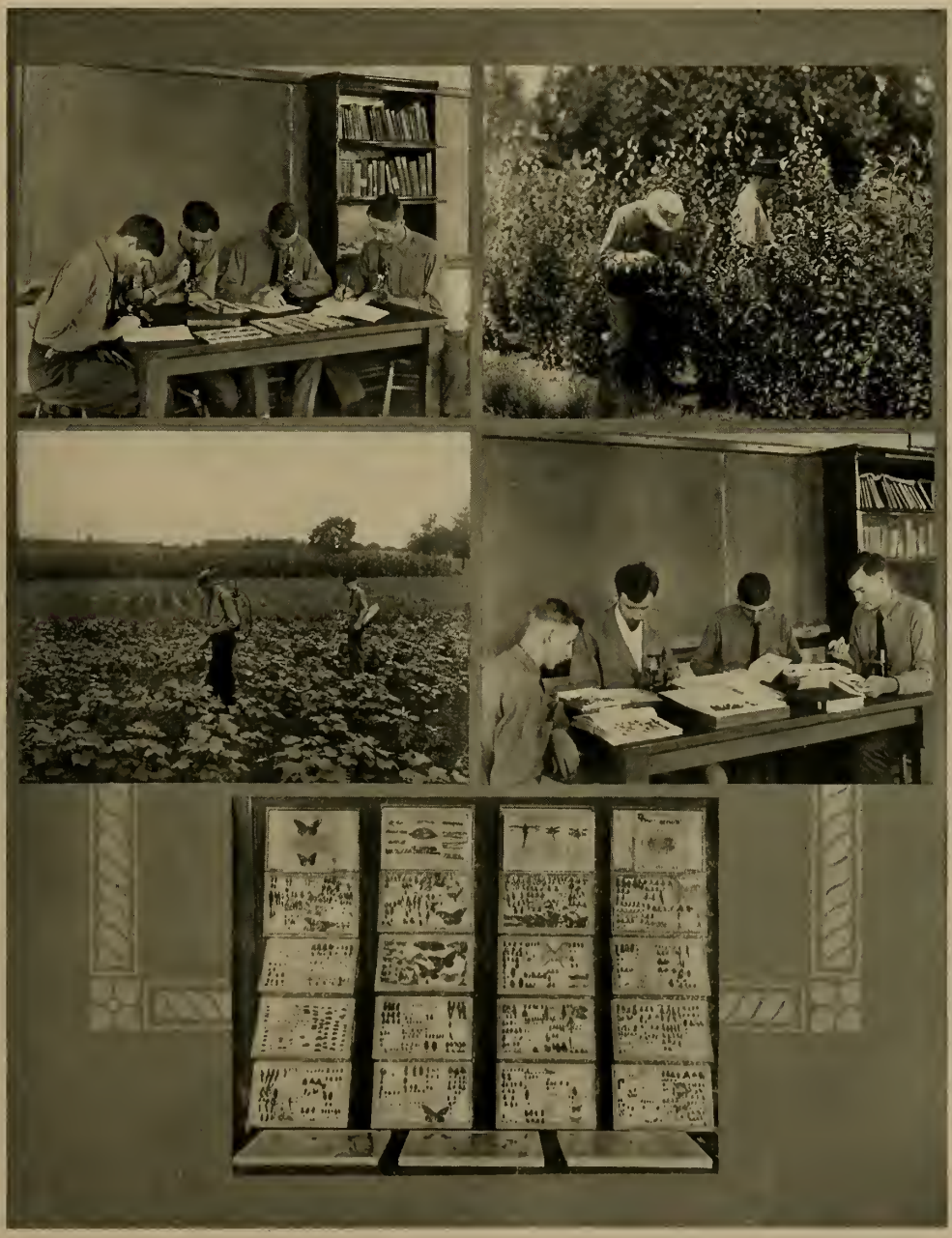
Zoölogy is the science that treats of animals. Because of its cultural and practical value, it is represented in all colleges. Entomology is the science that treats of a particular group of animals, the insects. Every plant that grows has its insect enemies; all domesticated and wild animals have their insect parasites; even man himself is subject to the attacks of various insects. On the other hand great numbers of insects are of the highest benefit to man; many plants can not produce seeds without the visitations of insects; and the honey bee adds millions of dollars to the wealth of the country each year. Because of the importance of a knowledge of insect life to the farmer, many agricultural colleges have separate departments of Entomology.

Our aim is to give students a broader vision of life, by increasing their knowledge of and an interest in all the living creatures about them. Special attention is given to insects and other animals of economic importance. The students learn to recognize the beneficial insects and how to control those that are injurious. Although we do not have the necessary equipment and force of instructors to turn out expert entomologists, each year a few of our men go into government or state positions in Entomology, and many of them are achieving success.

In Experiment Station work, this department carries on investigation in regard to life histories, habits, and control of insect pests. At present special study is being made of the insects affecting pecans, of the peach tree borer, of the scale insect of Mississippi, and of the crawfish of Mississippi.

A state law requires the Entomologist to inspect the nurseries of the state each year, and to have charge of the inspection of plants shipped into Mississippi. As no money has ever been appropriated for this work, we can devote only two or three months each year to it. It is police work of great importance. The farmers of Mississippi have already lost thousands of dollars by purchasing diseased fruit trees. Mississippi is probably the only state in this country that has not made financial provision for carrying on this important work for the protection of farmers.

From every county in Mississippi letters come to us asking for information concerning particular insect pests. All these inquiries are definitely and carefully answered. Thousands of people of the state have received assistance in this manner.



ENGLISH

The work in English at the Mississippi Agricultural and Mechanical College has a two-fold object: to give the student a practical knowledge of English composition, and to foster in him some appreciation of the beauties of literature. With this double object, the department fills two great vacuums in the general scheme of industrial education. It attempts to instil in each student the principles of composition by continual practice in writing and speaking, and to polish off the rough surfaces of a purely technical training by requiring each student to read the works of acknowledged masters of composition.

In an institution of this kind foreign languages, both living and dead, give way to the trades and sciences, but the study of his own tongue is always recognized as necessary to every student. Without a practical knowledge of his native language the engineer cannot make a clear report to his superior; the agriculturist cannot make good records of his experiences for the benefit of his neighbors and posterity; the school teacher cannot hold the respect of his community; the professional man rarely, if ever, can obtain a lucrative practice.

To express one's ideas clearly one must have a knowledge of the laws of composition. Indeed, men who have not made a study of composition have been known to become great writers, but their greatness was not due to their lack of training. The average man does not want to become a Shakespeare or a Milton; he merely needs to know how to express himself clearly, forcibly, and attractively, and to read appreciatively the best of our great literature.

The study of literature is a great aid to the study of composition. In the latter the student learns the principles of clear and forcible writing and speaking, and in some measure puts those principles into practice in his own work. But in studying literature he sees how those principles have been employed by the greatest masters of language, and hence gains an increased appreciation of the value of those principles.

The department seeks in every way to facilitate the work of the individual student in both composition and literature. For this purpose a special library has been established. This library contains many valuable works of reference, many duplicate copies of the works of standard authors, and a number of maps and pictures, the use of which tends to broaden the student's view of life in general.

PUBLIC DISCOURSE

"You've got to fight for success"—and Practical Discourse is your greatest weapon!

This weapon is given to the student of the Mississippi A. and M. College by the department of Public Discourse.

The department of Public Discourse trains students in the language of their vocation—in the language of industrial life. As the closest ally of the other departments of the college, it teaches the students how to study, assists them in gathering information, and trains them to win success by imparting this information to others through practical writing and business talk.

The courses of study, distinctive of this department, include vocational literature, business writing, and common-sense speaking,—all of which have hitherto been neglected by every school of the State.

In order to master the subject-matter of their vocation, the students read the most practical literature. Hoard's Dairyman, The Southern Farm Gazette, The Manufacturer's Record, Manual Arts, The Teacher's Journal, Science, Survey, The Atlantic, and The Nation are typical of the current periodicals read. Bulletins of the United States departments are used. The course in Public Service requires close reading of practical literature.

To make scientific knowledge useful—hence to assist the student and promote all academic departments—courses in vocational writing are given by the department of Public Discourse. The course in Business Correspondence offers the students of the Engineering, the Agricultural—in fact, of every school—their opportunity to learn to write applications, orders, circulars, follow-up letters. The courses in Public Writing and Civil Service Composition offer very practical opportunities.

For the same purpose, courses in Practical Speaking are given by the department. In the course designated Business Conversation, the students learn to talk man to man—tactfully, persuasively—"to win." In the course entitled Debate and Persuasion, they prepare to convince the public audience on business and public questions. In other courses—such as Agricultural Speaking—they learn to organize and conduct public meetings and to talk, as farm or civic leaders, on vocational topics: the silo, winter cover crops, commercial fertilizer, good roads, consolidated schools.

Eminently and distinctively practical is the department of Public Discourse. It assists the students in their debates and in their publications. It helps the other departments make current industrial knowledge, the yeast of Mississippi life, through news articles and public addresses. Through the Course for Teachers it does much to adapt the language work of the elementary schools to the needs of our people. Through correspondence and personal advice it assists local communities in organizing debating clubs, libraries, and other agencies promotive of industrial culture.

PHYSICAL EDUCATION

The primary object of physical education is the development of a boy—mentally, morally, and physically. Over-development in any of these lines is not desirable and can not be had without detriment to the others.

A sound sturdy body, with due attention daily to keeping it in repair, necessitates a clean mind and a strong will power. This combination enables the possessor to become a successful leader in solving the industrial problems of his day.

The department of Physical Training offers opportunity for every student to obtain recreation in healthful exercise. In his freshman year he may receive a thorough examination, which will give him a definite aim for improvement each year.

By regulation of the faculty all students are required to complete in a satisfactory manner one year's work in this department.

It is recognized by the highest authorities in educational circles that the hand, eye, and mind must be trained simultaneously. In recreative exercises and competitive games this threefold coördination is obtained, and the boy with sound intuitive judgment in play will be equally sound in his judgment of scientific, agricultural, and engineering problems.

The most valuable asset developed in this department is the sense of cooperation derived from team work. Coöperation in playing games teaches the value of sympathetic coöperation in other fields of service.

Our purpose, in harmony with that of the various other departments in college, is to produce a good citizen of average culture as distinguished from the specialist.

While Mississippi A. & M. has representative teams with a higher average ranking than any other institution in the South engaged in inter-collegiate sports, much attention is given to inter-class contests, thus permitting every student the privilege of competition. A reasonable period of training under competent instruction is required before teams are selected, and no boy is allowed to play if unsound physically.

Courses are offered in gymnastics, football, basket ball, baseball, track and field athletics, cross-country running, and tennis. Elective work is given to advanced students who expect to take charge of high school athletics or playground supervision. This field of service is growing rapidly and affords a splendid opportunity for advancement.

The equipment comprises two athletic fields, a quarter-mile cinder track, numerous tennis courts, indoor and outdoor gymnasium apparatus.

Increasing demands for graduates who can serve intelligently as coaches of teams and directors of recreation work in schools and cities and the ever increasing necessity for better citizens, trained to public welfare work, assure a bright future for this department.

HISTORY AND CIVICS

All educational training should have in view this definite end: The training of individual men and women capable of self-support, capable of further self-culture, and capable of a proper adjustment of themselves to the community life about them. The Mississippi Agricultural and Mechanical College has in mind the accomplishment of this threefold aim.

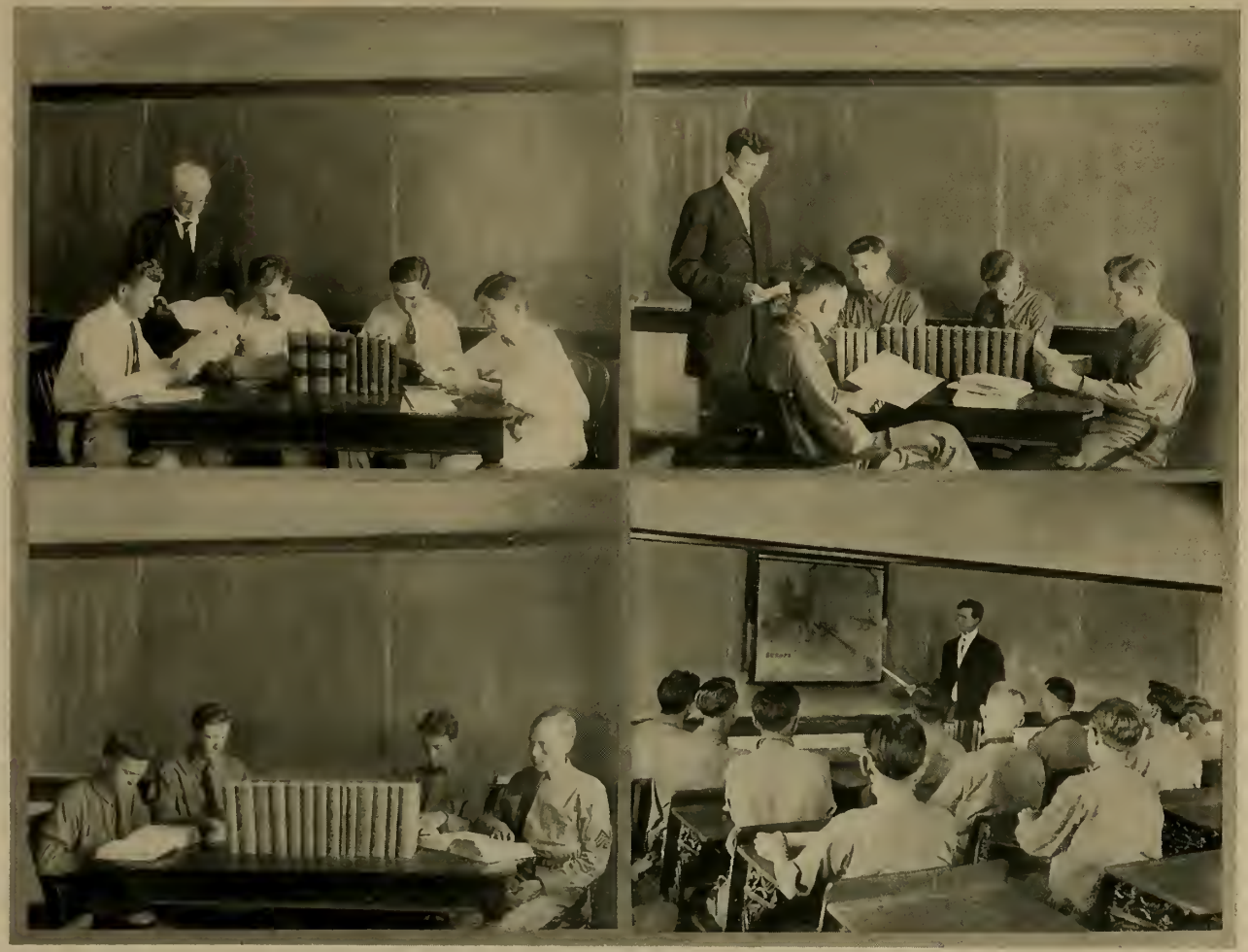
In the industrial and scientific departments, self-support and further self-culture are stressed. On the other hand, the department of history and civics has to do mainly with such a training of the men as will enable them the better to adjust themselves to the community life about them. No attempt is made to produce specialists in history, political economy, or government.

Men of all classes are called upon in life to pass upon important governmental and social questions. The plain everyday man, no matter what his vocation, decides on questions of most vital concern to himself and to those about him. He says whether or not there shall be a system of good roads throughout the land. He passes upon the questions of rural credit and rural schools. He fixes the standard of law enforcement. Indeed, it is the plain citizen, with the civic, cultural, and ethical standards that his training has evolved, who, in the final case, makes the country what it is.

For light in passing upon such questions, experience must be the guide. Patrick Henry said, "I have no other light by which my feet are guided but the lamp of experience." As with Henry, so it is with the men of today, light comes through experience alone, and experience can be obtained only in men's lives or through knowledge of the achievements and institutions of others. In recognition of this truth, courses are given in history, political economy, and government.

The courses in history include treatments of general history, English history and American history. The purpose is to give the student such a knowledge of world history as will enable him the better to understand, appreciate, and enjoy American institutions.

The courses in political economy deal mainly with the principles of the subject. Courses have recently been added in taxation and finance. The courses in government or political science are designed to give some familiarity with organization and operation of American governmental institutions, both state and national, and to make some comparison of American government with the governments of other great nations. Detailed statements concerning all of these courses may be found in the college catalogue.



MATHEMATICS

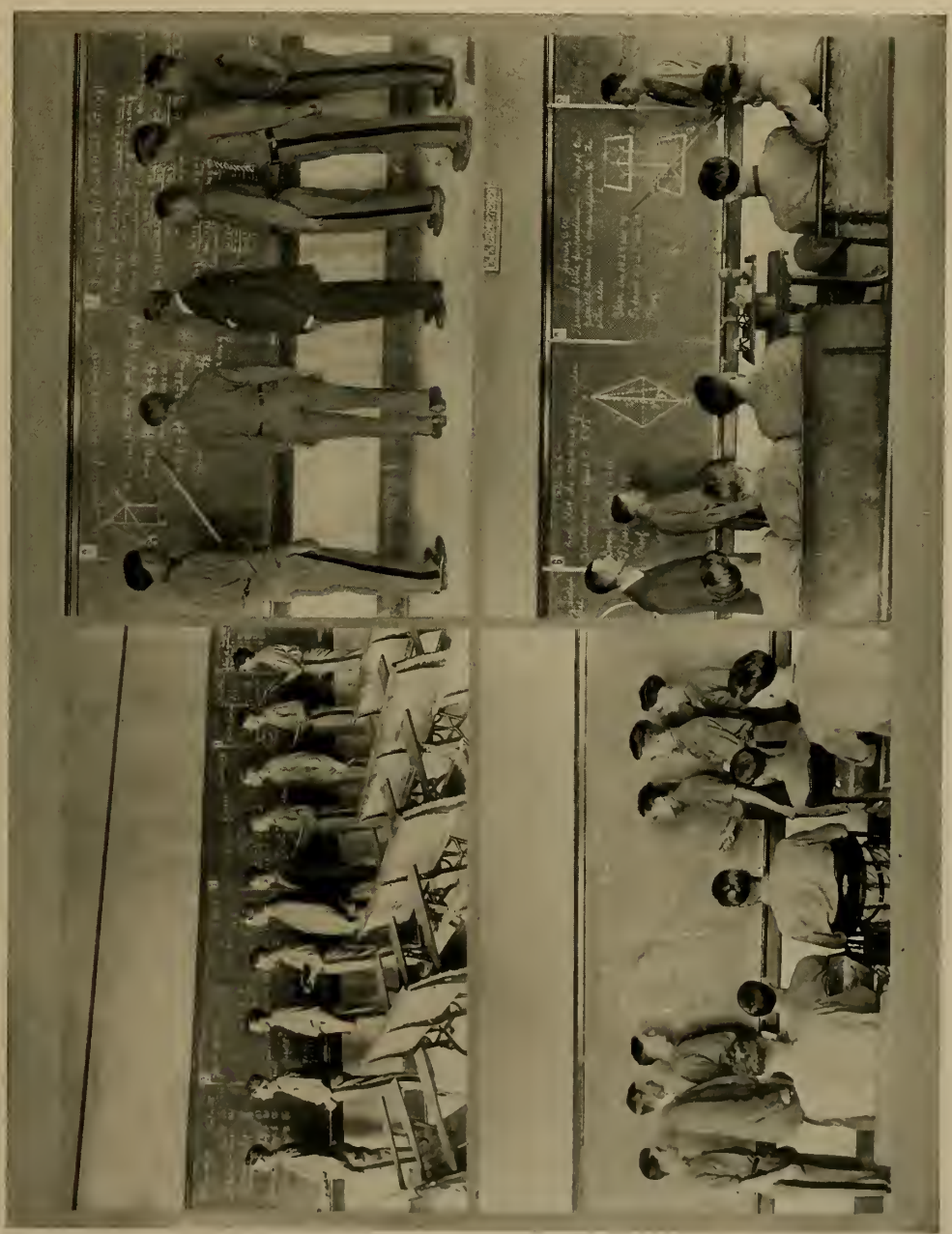
Mathematics may be defined as the science of quantities. It is one of the oldest and best known of the exact sciences, and ranks high among the important fields of study for developing mental strength, and accuracy in attaining and presenting truths.

Through the mastery of principles and methods and the continuous discipline to which he is subjected in the various courses, the student learns to think logically, to originate, to discriminate between the true and the false.

In the solution of mathematical problems accuracy in method and detail is absolutely necessary, and the training thus acquired is invaluable to men in every calling.

To the student who expects to pursue the scientific and technical branches of learning a command of the subject matter of mathematics is essential. The truths acquired in the courses of study are not learned merely to be forgotten but to be applied in problems involved in all engineering and other scientific work. The mechanical, the civil, the mining, the electrical, the chemical engineer,—all must rely upon their acquired knowledge of mathematics as fundamental in the practice of their professions.

The courses of study offered by the department are as varied and complete as the requirements seem to demand. Beginning with plane and solid geometry in the freshman class, the work passes successively through advanced algebra, trigonometry, analytic geometry, and calculus (differential and integral), to analytic mechanics, advanced analytic geometry, and advanced calculus (differential and integral). In each course the student is required to be accurate and thorough in his demonstrations and careful and precise in his language.



CIVIL ENGINEERING AND DRAWING

Engineering is the direction and control of the forces and materials of nature for the economic use and benefit of mankind; or, as someone has said, "Engineering is the art of doing, in a short time and with a small amount of money, what any fool could do if he had all the time and money he wanted."

To the uninitiated, it sometimes seems that engineering instruction is out of place in a school supported by a state whose interests are largely agricultural; but this view is deficient. The two principal problems in agricultural development today are the education of the farmers, and the keeping of the farmers on the farms. The latter problem is almost entirely an engineering one, and the first touches engineering at many points.

Experience shows that men will stay on the farm if living conditions are made tolerable—if they can have a share of the conveniences of the city.

Here enters the engineer, building better farm buildings, making possible light, heat, water, and power service in the farm buildings, improving sanitary conditions, installing telephones, constructing highways, and generally helping to improve country life.

Civil Engineering, as distinct from electrical and mechanical engineering, covers highway construction, drainage engineering, river and harbor work, flood prevention and control, water power and water supply engineering, city planning, and other allied subjects. At many points the various branches of engineering overlap and mutually coöperate.

With a fair equipment for our present necessities, we continually strive to broaden our field for instruction to meet the standard set by the modern technical school ideal, and to establish more points of contact with the public, so that we can become more and more the headquarters for advice upon our special lines of work.

Funds have never been available for the investigation of the various engineering questions of interest to the state. We hope this deficiency will be corrected in the near future.

In Drawing, we are endeavoring to supply such instruction in elementary freehand drawing as should be, but is not, given in schools of lower grade in the state; and in addition thereto, to carry the students through the various branches of mechanical drawing, machine drafting, and map drafting necessary to the particular lines of study in which they are engaged.

ELECTRICAL ENGINEERING

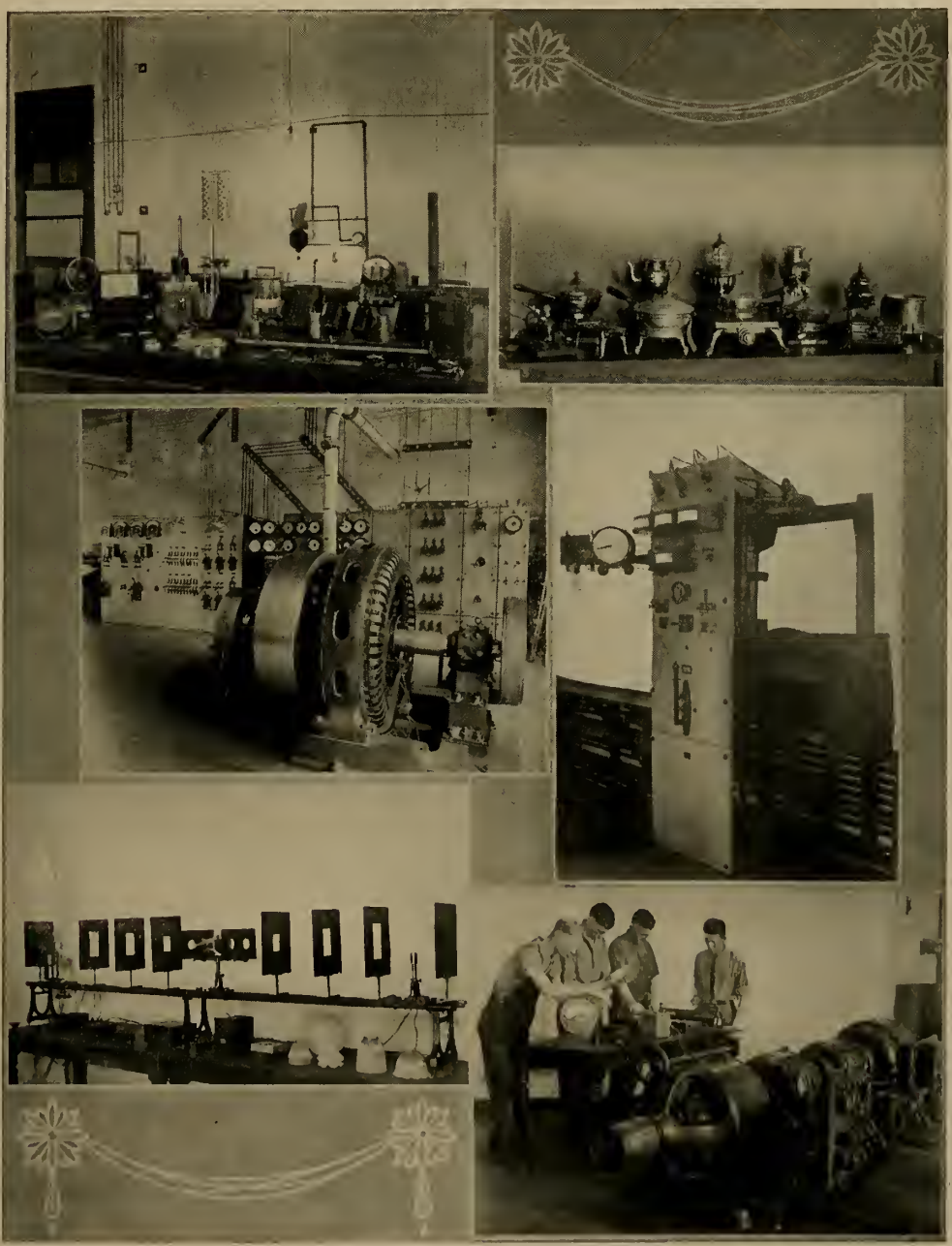
Under the land grant of 1862, the primary object for which this college was established is "to teach such branches of learning as are related to agriculture and the mechanic arts." The last named branch is taken care of by the School of Engineering, with its three main divisions, civil, mechanical, and electrical engineering.

The courses in Electrical Engineering are in harmony with the general scheme of industrial training and enable the graduate to deal intelligently with electrical problems likely to be presented to the practical engineer, and to enter successfully into practical work in those branches of engineering in which electricity plays the principal part. Electrical methods are being adopted in a constantly enlarging field, and this is steadily increasing the demand for graduates in this course.

The work of this department is closely related to the work of the mechanical department, especially in the earlier years of the course. Mathematics, physics, and chemistry are fundamental to it. In a great many cases, civil, mechanical, and electrical engineering problems overlap. Therefore the courses must have a number of subjects common to all. Electrical students take the regular courses and shop work with the mechanical engineers and have special stress laid on a familiarity with power and light plants, the operation of direct and alternating current incandescent, arc, and power systems, the principles of alternating currents and machinery, the installation of electric light systems, power use and transmission, and original research work in the electrical laboratory. They must also have some knowledge of certain civil engineering problems, like railway engineering and water-power plant construction.

Of recent years, more attention is being paid to modern conveniences in the farm home and to general improvements of rural living conditions. In our own state we now have a large number of country homes equipped with electric light and power plants so simplified that one without technical knowledge can operate them, but it is the engineer that has brought about this simplicity of operation. There are a number of undeveloped water power sites in our state which would yield sufficient electrical energy for lighting home and all outhouses and for power to operate fans, sewing-machine motors, and other power-consuming devices on the farm. The number of inquiries that this department has had lately about this matter gives evidence of the interest of some of our people in these projects. The installation and care of telephones on the farm are also part of our work.

This department is of service to the people of the state in settling disputes about meters, etc., in towns and cities and in checking up meters and other apparatus sent us from various parts of the state. Our standardization apparatus is of the finest; our laboratory equipment ranks among the best in the South, and with efficient aid and encouragement we hope to make it the best in the South.



GEOLOGY, MINERALOGY, METEOROLOGY, AND MINING

Geology, with its allied branches, is essential and fundamental to the instructional work of the whole College. Of all the sciences it is the one most fundamental to agriculture, since it deals with the origin and fundamental properties of soils. Through the investigations of the department the citizens of the State are furnished information concerning the rocks, minerals, soils, and underground waters; the clayworkers gain useful data about our clays; the well drillers and the authorities of the cities learn about the water supply; and the prospective buyers obtain information concerning our soils.

The department furnishes instruction to the students of all the schools of the College. The course in physiography is fundamental and of practical value in any walk in life. It is an introduction to the physical sciences, treating of the earth in its planetary relations, its topographic features and their origin, its natural phenomena, and its distribution of plants, animals, and man.

The general course in geology is of great educational value, since it is a study of the constructive and destructive forces and their results, the origin of rocks and soils, their erosion and destruction. In specialized work in economic geology, the student learns of the origin and occurrence of coal, oil, gas, salt, gypsum, fuller's earth, and other economic products.

Other courses given embrace mineralogy, a study of minerals, their origin, mode of occurrence, distribution, physical and chemical properties; meteorology and climatology; ore deposits and mining; and soils and soil surveying, dealing with the physical and chemical properties of soils, soil provinces and types, the recognition of soils in the fields, their classification, and actual practice in soil surveying.

The department is able to be useful to the citizens of the State through its laboratory determinations. Rocks and soils are tested and examined and minerals are determined free of charge. Soils, minerals, and rocks are examined in the field when practicable.

In coöperation with the State Geological Survey, the department carries on investigations with regard to the geological resources of the State. The results of these investigations are published in reports on the clays, structural materials, and limestone and marls for agricultural purposes.

Under direction of the Experiment Station, investigations are made in the laboratory and in the field of the soils of the State with regard to acidity, fertility, deficiencies, and types. The results are published in bulletins, which are sent free to all who desire them.

The department receives from every part of this state, and from other states, numerous inquiries relative to all phases of the work in progress. Careful and prompt attention to these letters enables us to disseminate useful information to a very large body of our citizens.

MECHANICAL ENGINEERING

Mechanical engineering, as understood today, includes the design and construction of steam engines and steam boilers, gas and gasoline engines, complete power plants, machine tools, hoisting and conveying machinery, cranes of usual types, rolling mill machinery, automobiles, steam-boats, heating and ventilating appliances, and all other types of machinery for manufacturing purposes.

A noted educator says, "The object of education is service, and for service the man needs not merely to be perfectly and normally developed in every part of his nature, but also thoroughly furnished, equipped, both with tools and with the skill to use them. Therefore, he must have the scientific and the technical training."

The young apprentice in a commercial shop acquires knowledge slowly and with difficulty. He learns the use of a particular machine or to do a certain piece of work, and once having learned this, he is kept working at it to gain skill and rapidity. In the technical school the student is taught the use of the machine, the principle of its construction, the nature of the material worked, and the errors to avoid. After learning this, he is allowed to pass to the explanation of some other process. The technical school should be just as well equipped as the commercial shop, but the equipment serves a very different purpose. The object of the equipment is the production of intelligent working people and not the production of salable commodities. When shop instruction is used to further commercial ends, it loses its educational value. The student often looks upon the commodity produced as the real purpose of his manual training work, but when he is grown to manhood, it becomes apparent to him that the strict training received in the making of these models was only a method of ingraining the habit of accuracy, care, self-reliance, and neatness, in addition to the general dexterity of hand and a greater love of work.

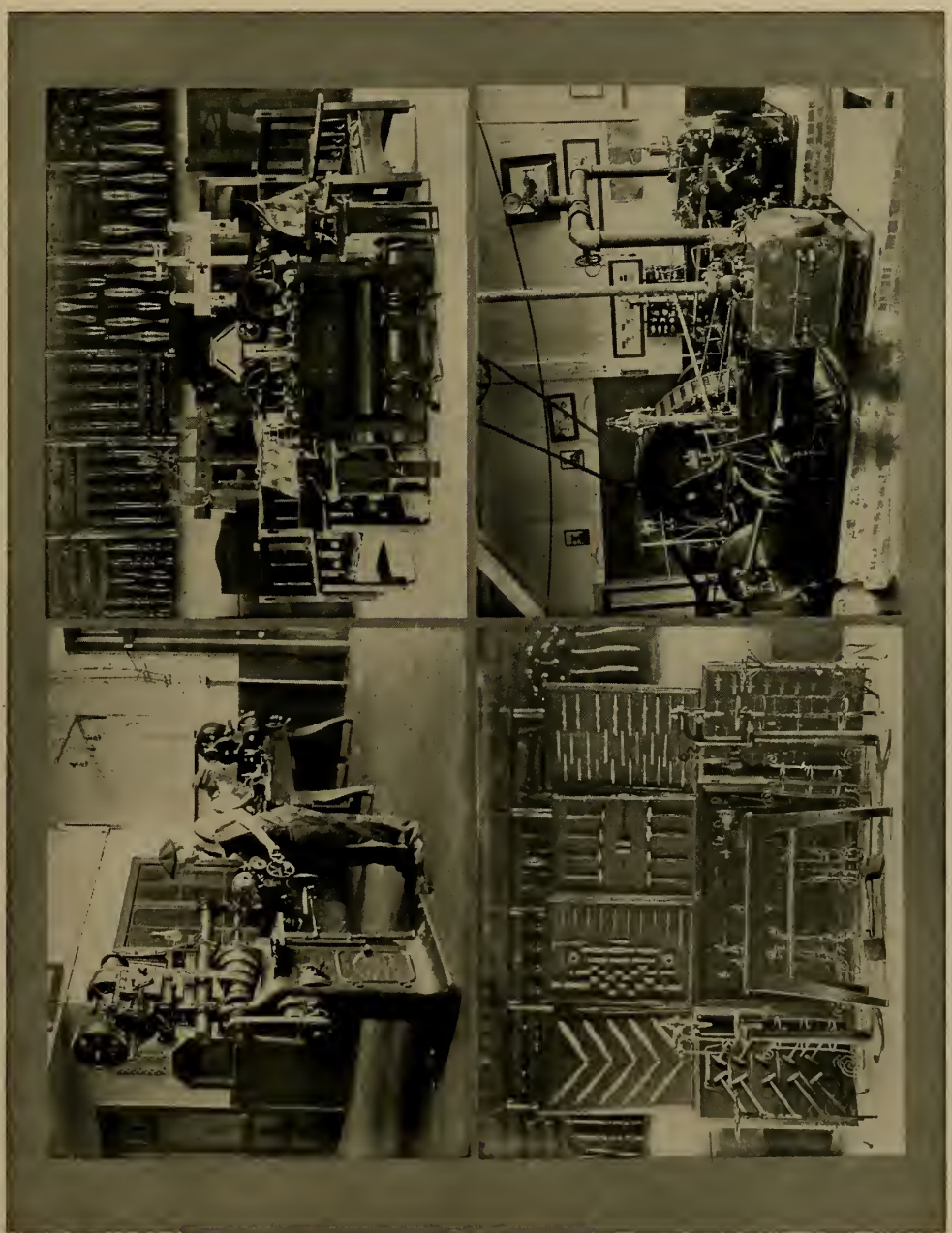
Realizing the great importance of this practical training, the policy of the College is to require all students who graduate to take shop instruction at some time during their respective courses. Laboratory and shop courses are given to supplement and reënforce the work given in the class room. "This method of bringing the hand and mind to work together lies at the basis of all true technical education."

Practical instruction is given in wood work, pattern making, forge and foundry work, and machine work to all engineering students.

Courses in shop work and manual training are arranged and given to suit the requirements of students taking courses in agriculture, general science, and industrial education.

The equipment of the department for teaching the different branches of the work is being enlarged as funds are available, and as the number of students enrolled increases.

In the laboratories, the shops and the central power plant are various types of appliances and machinery for demonstration work.



PHYSICS

In a world of progress, how natural that we should find law and order holding everywhere! What could be more interesting and instructive than a study of this law and order?

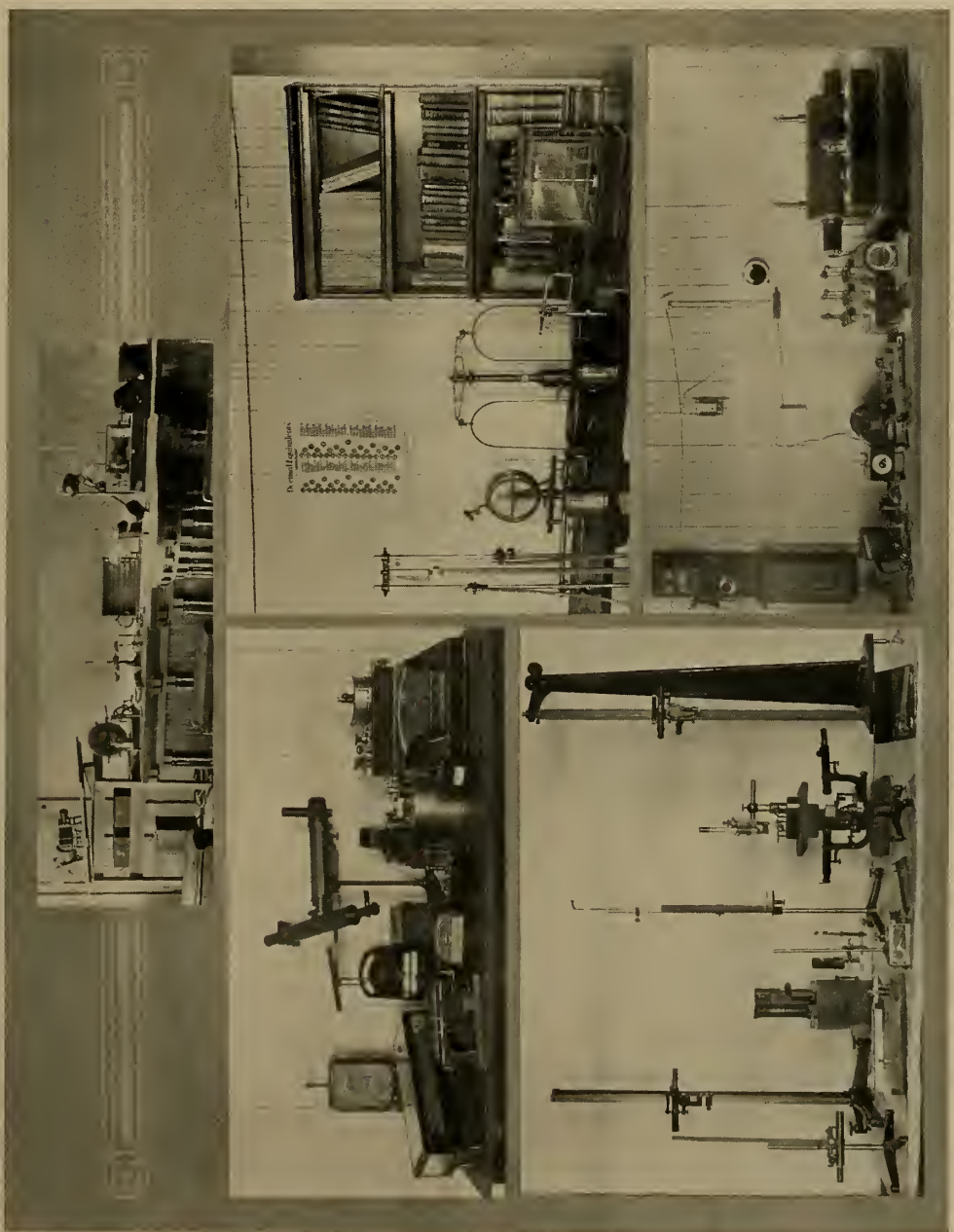
Physics is the science that treats of the phenomena of nature, the changes in matter, and the laws according to which these take place. It treats of so many phenomena which are facts of every-day experience that it must be one of first importance to every one. From such study, the man in common walks of life can better understand and practically apply the facts of his experience to his profit. The student in any science needs a knowledge of physics, because it is so fundamental to all other sciences, and an understanding of any of them is greatly increased through this knowledge. With chemistry it is so intimately related that either science scarcely has a problem in which the other is not involved, while it is very essential to mathematics. To the natural sciences it is less closely related, yet in them it is of great importance.

Its application in agriculture is most pronounced in problems of soil physics. Engineering of any form is but applied physics. Civil engineering deals with problems in mechanics; mechanical engineering deals with problems in mechanics and heat, particularly; while electrical engineering makes practical use of our knowledge of electricity and magnetism.

To the cultured man in any profession, a knowledge of the elementary principles of physics is also useful: to the lawyer in his cases; to the doctor with his X-ray; to the minister in being able to understand and apply illustrations; to the historian and the writer.

In the department of Physics at A. & M., the regular college work is carried along on three lines. One group of courses is suited to the agriculturists; another to the engineers; while the third is planned for the students of general science. Courses are offered to the summer students and teachers also, for the specialists and graduate students. Advanced courses in the general divisions of the subject are being planned. Among these are advanced mechanics, heat, electrical measurements, light, aeronautics, and wireless telegraphy.

The department is equipped with thoroughly modern and practical apparatus to which additions are being made from year to year. A wireless receiving station is a part of the equipment.



INDUSTRIAL EDUCATION

Five lines of study, represented by as many sciences, all related to each other, namely, psychology, education, logic, sociology, and ethics, are comprised in the department of Philosophy and Sociology. The general subject Education is further subdivided into the history of education, psychology as applied to the educative process, practical school management, and practical teaching under trained supervision.

The objective in the School of Industrial Education, of which the department of Philosophy and Sociology forms a part, is primarily the training of teachers for service in industrial schools. A knowledge of the school development and activities of the child mind is a fundamental equipment of the successful teacher. The well known fact that the school is a social institution, one in which the people of a community have to coöperate in order to secure certain advantages for the young, renders it desirable that the young man who aspires to teach should equip himself with a scientific knowledge of social elements and their value, as well as the operation of social forces. The teacher, in order that he fulfill completely his mission, needs to become in the highest sense a community leader. To instruct the young he needs to know the child mind; to be a community leader he needs to know human nature and human aspirations; in order to maintain his leadership the teacher must be able to balance properly human motives and conduct. These, psychology, sociology, and ethics will help to do.

In the relations growing out of good citizenship in any community one needs to be able to weigh the words of those who would influence others by speech, whether written or spoken. Logic goes as far as science can in training men to estimate the value of consecutive discourse.

In addition to the general courses named in the introductory paragraph, the department offers courses for the training of teachers in the special methods of the several subjects of the primary, intermediate, and high school; training in the supervision of school and home garden plots worked by school children; a course in the ethics of business life and other vocations; a practical course in the study of rural life as we find it in this state and in the South. For several years the department has each year given instruction to a group of students doing advanced work in one or more of the subjects named. The number taking this graduate work has increased steadily, indicating a growing interest in the several closely related sciences of the department.

DIVISION OF BUSINESS ADMINISTRATION

Farming is a complicated business. Sir Horace Plunkett, the leader of the coöperative movement which has done so much for the building up of Ireland, says: "It seemed we needed three things: Better farming, Better business, Better living. But I saw that emphasis must be laid on the middle phrase, because only through better business could we get better farming or better living. First make the farmer a better business man, and these other things will be added unto him."

To make our farmers better business men, the course in business administration was established. The farmer needs more money for good roads, consolidated schools, blooded cattle, and farm improvements. To get it, he must learn to record and watch his income and outgo more closely. He must learn how to deal with his fellow-man. He must learn how to market his crops to the best advantage. He must learn how to coöperate with his neighbors. The secret of success in coöperative enterprises, says Clarence Poe, lies in careful auditing. We propose to train farmers to do these things accurately, for we believe that neither successful farming nor any successful business can be carried on without this careful keeping of records.

Such training is valuable also to any business man, and it will be especially worth while to Mississippi business men to be trained in the fundamentals underlying business in Mississippi's great agricultural school. Here they can learn the farmer's problems, and help to solve them. The farmer is the backbone of the State.

The student learns bookkeeping, auditing, typewriting, shorthand, elementary agriculture, cotton grading, botany, physics, English, mathematics, history, Spanish, psychology, ethics, economics, market, taxation, public discourse, and other subjects which make him an intelligent, broad-minded, patriotic citizen as well as a clear-headed business man.

The college has maintained a course in bookkeeping from its foundation. The demand for this course has been urgent for a number of years. The farmer cannot hope to progress rapidly until there is a body of trained men ready to look after the business end. These will be provided by this course, which has been made possible by slight readjustments in our present work.

The farmers and business men over the State are enthusiastic in their approval of this course—the first of its kind in the South. It marks an epoch in the history of Industrial Education, and will be a potent factor in the improvement of country life.

Efficiency is a great deal more than mere skill in performing routine tasks, important as that is. It implies breadth of view, keenness of observation, grasp of underlying principles, thinking power. To obtain such efficiency, training is necessary; it can be had at A. & M.

There is only one way to handle men—know more than they do. The course in Business Administration lays the foundation for success in handling men. Thoroughness, accuracy, honesty, are the standards set.

Of course, one can learn in the "School of Hard Knocks." But such training is slow, expensive, one-sided, unsatisfactory, and discouraging. Four years of well-rounded work at A. & M. are worth ten of haphazard work without aim.

The College is making plans to audit accounts for farmers who will keep simple records, thus helping them to keep up with their business easily and accurately. We wish to serve the State in every way possible. Accurate accounts are the foundation of success.

MODERN LANGUAGES

Languages are studied from two viewpoints—the cultural and the practical. The practical is stressed here. In order to keep up with the latest developments in scientific research, the student must know how to read German, and should know French. No medical college now admits students without a knowledge of at least one modern language. With the opening of the Panama Canal, and the development of trade with Central and South America, Cuba, and the Philippines, Spanish has become very important. Therefore eleven years ago, the department of Modern Languages was established.

In the School of General Science, the study of German is essential. Especially in chemistry, it permits the use of German texts in the laboratory—a thing done elsewhere only in the best of the large universities. The scientific departments coöperate fully with the department of Modern Languages in coördinating the work in language with the work in science. The classes read texts which parallel the work being done in the laboratory.

In the School of Industrial Education, the languages are taught more from the cultural standpoint, and Spanish is stressed because there is a growing demand for teachers of Spanish in our public schools.

In the School of Business Administration, Spanish is taught for its practical value to the business man.

In the School of Agriculture and Engineering, the student may study any of the three for which he may have the most need.

The courses are two years in length in German, French, and Spanish. Elective courses in special scientific reading, pronunciation, conversation, and history of literature are offered.

The equipment consists of maps, a few books of reference, and a lantern. Additional equipment in the way of books, a phonograph for teaching pronunciation, etc., is badly needed.

Interest in the work has steadily grown. Students who are preparing for scientific callings, for positions with the government, for teaching, and for business, realize the practical value of a modern language. Classes are increasing in size and number. The coördination with other departments is becoming closer, thus arousing greater interest among the students. The College as a whole is growing in practicality and scientific methods. In this movement the department of Modern Languages is a vital part, and it is growing in usefulness as its sister departments develop.

EXTENSION SERVICE

There has been worked out in America a comprehensive system of agricultural development and instruction which, in a broad sense, is undoubtedly without a parallel in any time or country. A part of the general plan is comparatively new, but an important part of it has long since passed the stage of experiment.

The agricultural and mechanical colleges were established primarily for the training of young men. These were to be given advantages which their fathers on the farm were denied. The teachers of agriculture in the new colleges very promptly found themselves facing a somewhat new and unusual condition in academic affairs. There were few precedents to guide them. A system of theoretical and practical instruction had to be devised and put into use, and the difficulties of the situation were increased by a critical examination of the character of the available information concerning the science and art of agriculture. It soon became plain that much work remained to be done before the new courses in agriculture could be expected to accomplish the result for which the colleges were most largely created. On every hand there was a need for a more careful and a more scientific study of agricultural problems.

With the meagre facilities available, the colleges would have required many years to carry out the research necessary to develop the facts and to formulate the principles of the various divisions of scientific agriculture as we know and teach it to-day. To aid them, and through them the agricultural classes generally, the experiment stations were established in 1887. These were intended to be an integral part of a system of agricultural instruction; the stations were to be institutes of agricultural research, and, consequently, the sources of information and inspiration for the colleges which preceded them. The stations and colleges taken together formed in effect in each state an agricultural university, and the union of these two institutions completed the plan for supplying adequate instruction in agriculture to college students.

While the founding of the agricultural and mechanical colleges and the establishing of the experiment stations placed before the college student abundant opportunities, there yet remained a gap in the educational program that appeared wider and more significant as agricultural leaders attempted to close it through the means at hand. The colleges were established for college men, but these form only a small proportion of the population engaged in farming. To "benefit agriculture" in a broader sense, the necessity of carrying to the farmers on the farms some of the advantages offered the college student steadily became more apparent and more imperative.

It ought to be recorded to the credit of the agricultural colleges and experment stations that the most conscientious efforts were put forth to carry agricultural instruction and inspiration from the college to the farm and thus to

include within the view of these institutions the entire field of agricultural development. With this object in view, many lecturers were sent throughout the states to study conditions and to advocate improved and progressive methods, based upon the work of experiment stations and the best agricultural practice everywhere. The "farmers' institute" followed as a logical development, and very soon the visible results of this extension of the facilities of the educational institutions created a necessity for the expansion of the service, which was wholly inadequate.

Through the constant endeavor of effective leaders in agricultural thought and development, the necessity for broadening the scope and enlarging the facilities of the agricultural and mechanical colleges was pressed upon the attention of the federal government. The result has been the enactment into law of the Smith-Lever Bill, which will ultimately place at the disposal of the extension work in this state approximately one hundred and forty-two thousand dollars annually, provided a like sum is subscribed by state, or by the state, counties, and individuals combined. There will thus be available finally for the agricultural extension service almost three hundred thousand dollars each year. This is a large sum, but the hope that it might be expended in a way to justify the wisdom and prophetic foresight of those who have labored so effectively for the extension service has already developed into a conviction that the work is going to reach and benefit so many farmers, farmers' homes, and rural communities that no question will ever be raised as to whether the effort is worth the cost.

The extension service will be carried out by the college in coöperation with the U. S. Department of Agriculture. The plans already made for it are comprehensive. Farm demonstrators, trained by practical experience and by the School of Agriculture of the A. & M. College, will bring to every progressive farmer and agricultural community the most helpful information and advice, to say nothing of the enthusiasm and vocational pride which the general program must foster and even develop.

The county agent, or advisor, is certain to become an increasingly important factor in placing the industry of agriculture in the counties upon a rational, more permanent, and more profitable basis.

The boys' and girls' club work already supplies one of the most effective means of reaching and enlisting the interest of the men and women on the farm, while training a young generation to become worthy successors of an enlightened agricultural practice.

The duties of the Extension Service are by no means limited to the improvement of the farm and the farmer. The farmer's home, his school, and the best interests of rural community in general come within the scope of this work. That it will become a great and permanent agency in improving agriculture and enriching rural life in Mississippi, no one who has observed its beginning can have a reason to doubt.

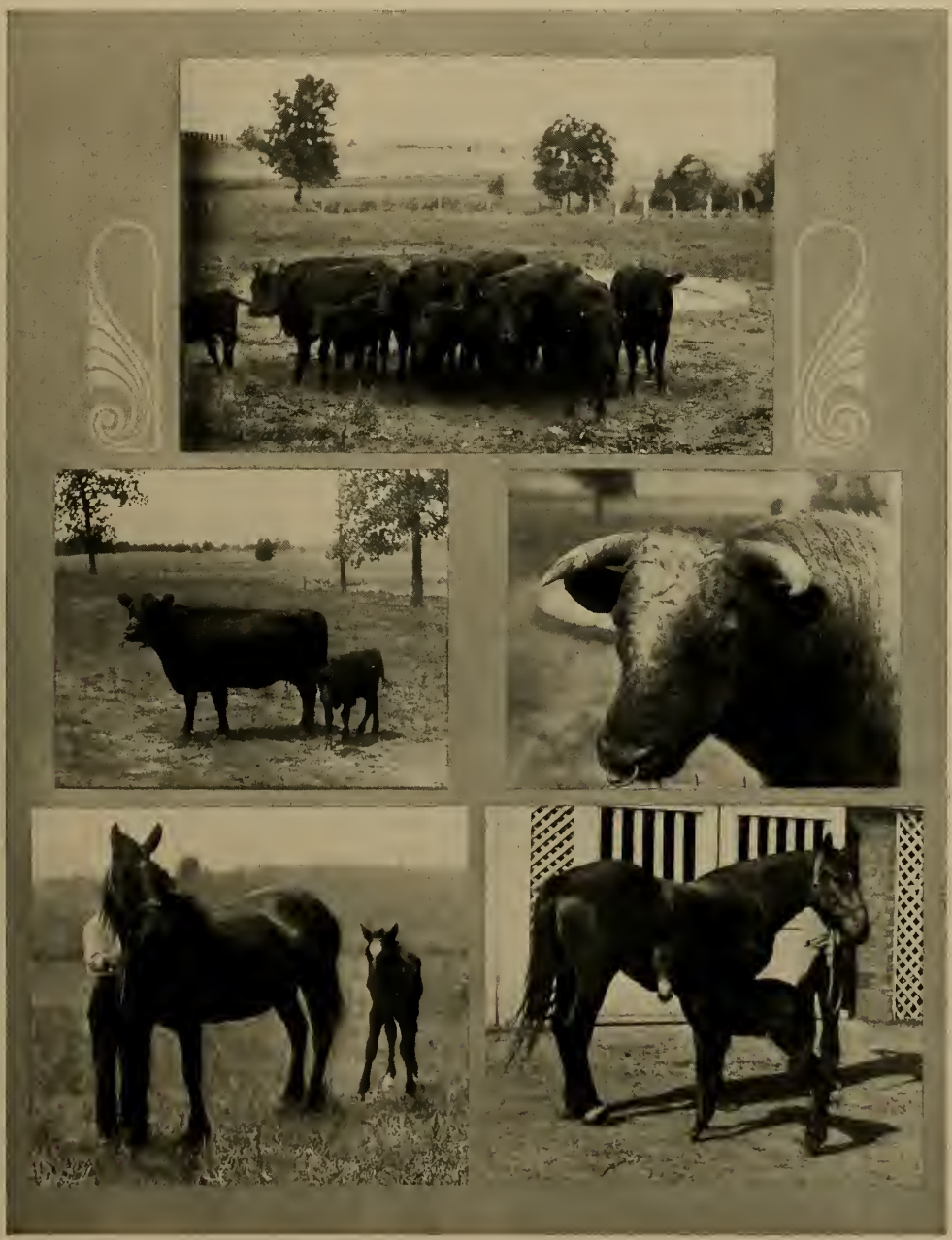
THE MISSISSIPPI AGRICULTURAL EXPERIMENT STATION

The agricultural experiment stations are essentially institutions for research in agriculture. After an experience of almost thirty years, it is safe to say that they are now more nearly than ever before fulfilling the true purpose for which they were established. Many difficulties presented themselves in the early days of these institutions. They were new in conception and design; no record of experience was available for their guidance: but the fundamental problems growing out of the general plan have been solved, and the stations now find themselves a strong arm of the public service.

The first function of an agricultural experiment station is the acquisition of knowledge that will benefit agriculture. It is not the sole or even the principal object of the station to collect all possible information on agricultural subjects and to pass this on to the farmer in language that he can best understand and in a way that will secure and hold his interest. Its purpose is much broader than this: the station seeks to secure, through systematic research in its various divisions, information that will advance scientific agriculture, and in this important respect, it is an institution for advanced education in agriculture. In organization and spirit it may be likened to an agricultural university.

The Mississippi Experiment Station is an organic part of the Agricultural and Mechanical College. The problems coming before its staff are largely those arising from or suggested by agricultural conditions of this state. Of course, many of these are necessarily fundamental in character, and the solution of them adds so much to our common store of knowledge. A zeal for the study of new problems in agriculture and in the sciences bearing directly upon it very properly characterizes the experiment station staff, but the improvement of agriculture in Mississippi is the immediate object of its organization. It is certain that the station can be most helpful in this respect by keeping itself in the closest touch with the varied problems of the Mississippi farmer. A spirit of helpful coöperation between the farmer and the experiment station is not only desirable; it is absolutely essential.

Through its branches at McNeill, Holly Springs, and Stoneville, questions of importance to the agriculture based upon three of the largest types of soil in the State may be studied near at hand. The directors of these branch stations lose no opportunity of coöperating with the farmers in their districts. In this way the important agricultural problems may be formulated and systematically studied. The branch stations have carried out successfully the object for which they were created, and it seems certain, therefore, that they have amply justified the foresight that led to their establishment.



THE HOG DEPARTMENT

The hog work of the Mississippi Experiment Station has been growing in importance, especially during the last three years, and people are giving their attention to this important branch of the animal industry. The course adopted by the Extension Division of the Department of Agriculture in establishing pig club work throughout the South shows the necessity of experiments to give people who are about to enter this line of live stock development sufficient knowledge in breeding, feeding, care, and management of hogs.

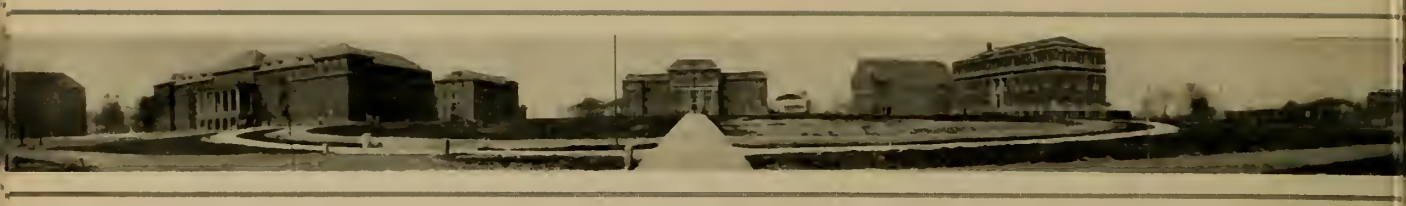
On account of the practicability of raising hogs in the South, the experiments in this department are especially valuable to the small farmer. It is most important that this information should reach the public, and that it should originate in the Experiment Station.

These experiments are conducted so that they will correlate with other experimental work elsewhere, and not repeat or over-lap experiments that have already been prepared.

It must be readily seen that the relation of hog work to agriculture is very close. Up-to-date and successful methods along agricultural lines depend upon the production of live stock. As the investment necessary to raise hogs is less than for any other line of animal production, the profits are large in proportion to the amount invested; therefore, this industry will be popular as well as profitable. It has been determined here that it is unprofitable to attempt to raise hogs unless proper pastures are provided so that the animals can harvest their own crops. It has also been determined that disease and parasites can be controlled. Information on this will be furnished free on application to the Hog Department, Experiment Station.

Special colony houses that provide shade and sanitary quarters are essential. It is also important that good fences be provided for keeping hogs within certain enclosures. A great factor in successful hog raising is good, pure water.

This department will become more important as time and experience prove that the dangers and drawbacks to the hog industry can be overcome. A very important feature of hog production is the finishing and marketing of the animals, and we believe that the establishment of clubs to sell them will be one means of accomplishing this end.



THE GENERAL LIBRARY

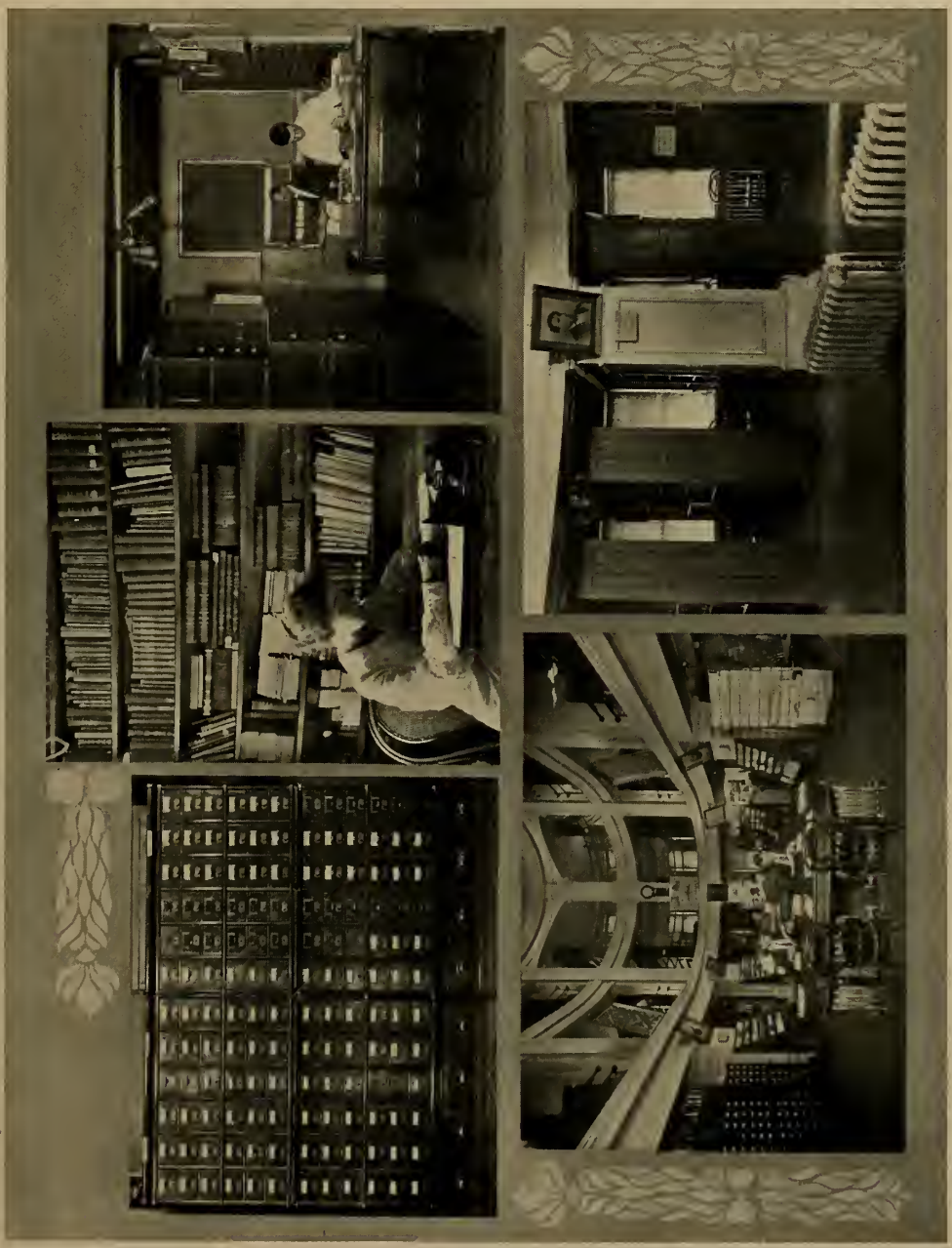
"The function of the library as an institution of society is the development and enrichment of human life in the entire community by bringing to all the people the books that belong to them."

The heart of the college is its library. For the instructor it is not less important than for the student. One cannot think of a broad academic life without adequate library facilities. In a very important sense, the library is the center of academic inspiration.

The attendance at the library is an indication of how much it is appreciated by the college community. Last year more than 12,000 books and periodicals were circulated outside of the general library, and the attendance was almost 50,000. The library itself contains 25,000 books and approximately 73,000 unbound periodicals. The College very naturally makes every effort to enlarge the library, which for an institution of this kind should certainly contain not less than 100,000 volumes. The successful college man is not necessarily a book worm, but much of his time is spent with books. These are the reservoirs of human knowledge. Many sciences are represented in the college curriculum, and instruction in these departments ought not to be, and cannot be, limited always to mere textbook and lecture work.

The usefulness of the library is greatly increased by the card index. Work on this is almost constantly in progress, and more than 60,000 catalogue cards are already available to users of the library, and many thousands of index cards will be required for the analysis of the books already available.

Of course, it need not be added that the usefulness of a general college library is by no means restricted in its service to the technical departments of the institution. Technical and scientific subjects, important as they are, are not the whole of college life. The training of the student is much broader than this. History, literature, and art are not to be neglected in the development of the cultured man. There is scarcely a side of college activities that does not come in contact with the library. Almost all academic paths lead to it, and the institution intends to improve it year by year.



THE COLLEGE INFIRMARY

Increased attention to general sanitation, personal hygiene, pure water, air, and food may be counted among the more hopeful signs of the times. More than ever before young men are placing a value upon good health and a robust constitution as assets in the life career. In the constantly increasing competition between men in all lines of endeavor the importance of the power necessary for sustained strenuous effort was never more apparent.

A sanitary environment is absolutely essential to the well-being of any community, but the sanitarian finds his work difficult without the hearty coöperation of the citizen. The College attempts to secure this coöperation through both precept and example. No effort has been spared to insure the effectiveness of the sewerage system and the purity of the water and food supplies, and it need hardly be added that the maintenance of the best sanitary conditions throughout the buildings and grounds of the entire institution receives the diligent attention of the authorities. The general healthful environment may be said to serve the double purpose of guarding the health of the student and supplying an object lesson that the thoughtful man can not soon forget.

The J. Z. George Infirmary is fully equipped for the care of the sick. Besides two large wards, there are several private rooms for special cases or those requiring isolation. The nurses see that those in their care receive every reasonable attention that may contribute to their comfort. The expense to each student for medical attention is small. There are no extra charges for consultation, drugs, or for special or expensive treatment that may be necessary in unusual cases.

THE YOUNG MEN'S CHRISTIAN ASSOCIATION

The Young Men's Christian Association of this college has been in existence since 1882, and since its organization it has played a very important part in developing manly character among the students.

We have the largest associate and active membership of all schools, colleges, and universities in the South, and the high record of voluntary attendance at the two religious meetings speaks well for the general Christian character of our young men. During the last college year there was an average attendance at Wednesday night prayer meeting of 145, and at the Sunday night meeting of 450. During the last college year a Bible school was organized with an enrollment of 250 students, and this added to the attendance of the several Sunday-schools in Starkville made a total of 620 attending sabbath-school.

The Association reaches all the young men in the college in one way or another, and the close connection helps to round out the purpose back of all Y. M. C. A. work; namely, to influence men to lead a true Christian life, to make the best of their opportunities for mental development, and to stand for and take part in clean athletics, as embodied in the trinity of words: Spirit, Mind, Body.

We are now using our magnificent new home, and we have reason to feel grateful to all those who made it possible for us to enjoy to the full the many pleasant and wholesome relaxations that are necessary if one would accomplish the most from college life. "All work with no play makes Jack a dull boy," is every bit as true as "All play with no work makes Jack a dull fellow," because of the lack of that which goes to make the well-rounded man.

Every student who has figured out for himself a budget of time as well as a budget of expense finds that he can well afford to be a member of the Association, for it gives him training that he can not get in the class room: it clears him from brain fag; it shows him the social side of life (man after all ought to be a social creature); but above all it tries to show him the measure of the stature of the man in Christ Jesus, for the one who strives to measure up to this standard is bound to be a better student, a better man, and will serve the community in which he will eventually live in a faithful, honorable way.

THE STEWARD'S DEPARTMENT

"Ho! we are called to a feast,
The Bull's head is baked to a turn."

No department of the college is of more importance than the Mess-Hall, where the students meet thrice daily, to partake of their meats.

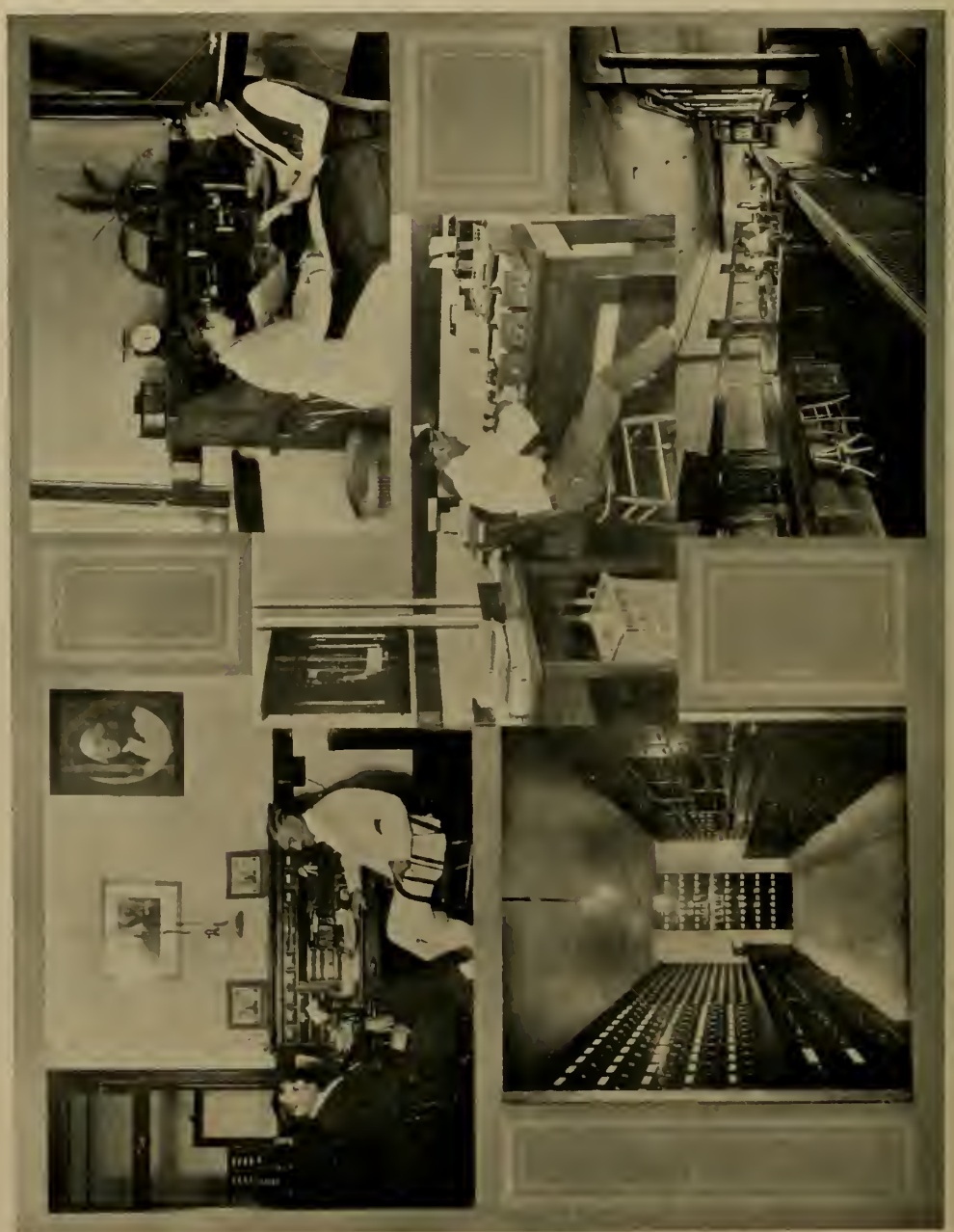
It has always been the policy of the administration to endeavor to give to the students the very best the market affords in the way of good wholesome foods, at the lowest possible cost, and there has been marked improvement, not only in cuisine but in service and sanitation, in the last few years.

More than ten thousand dollars has been expended in the last two years in this department in improvements; such, as cold storage facilities for the care of fresh meats and other perishables; sanitary floors, and serving tables in kitchen and bakery; the introduction of dish washing machinery where the silver-ware and dishes are thoroughly cleansed and sterilized under superheated steam.

The butter and milk served in the Mess-Hall are of first class quality and are produced by the dairy and creamery departments of the college, by students' labor. The beef and pork are raised and fattened on the college farm, and the slaughtering is done also by students.

Experiments recently made have demonstrated that we can make excellent hams and bacon on the campus out of our experiment station pigs, and in future this will be done, thus insuring healthful products for the Mess-Hall.

Arrangements are now being made to accommodate in dining hall and dormitories 1,200 students, as we have many reasons to expect that number to matriculate during the session of 1915–1916.



BUSINESS OFFICES

MULTIGRAPHING DEPARTMENT

IN FRONT OF ENGINEERING AND CHEMISTRY BUILDINGS

THE COLLEGE BAND

MILITARY DEPARTMENT

The establishment of colleges of agriculture and mechanic arts in the states is due primarily to the Morrill Act, which passed Congress during the war between the states. Instruction in military science and tactics was one of the important conditions imposed by the federal government at a time when the necessity for young men trained for the military service was very keenly felt.

The Military Department is under the direct supervision of an officer of the U. S. Army. While the department itself is maintained primarily for the training of men for the service of the nation in time of war, there are many advantages in a course of military training and discipline from the point of view of the civilian. System, promptness, obedience to proper authority are absolutely necessary, of course, to a military organization, but systematic and well-ordered methods of work, habits of promptness, and a proper attitude toward those in lawful authority are all highly desirable in civil life.

Military discipline at the Agricultural and Mechanical College is firm, but not irksome. The regulations in force are designed to bring about a system of orderly conduct among the cadets. The proper enforcement of these regulations rests with the Commandant and the cadet officers and non-commissioned officers. The student body is organized into an infantry regiment of twelve companies. The regimental band is a regular division of the military organization.

In addition to the training in tactics and marksmanship, the department of Military Science interests itself greatly in the physical development of the cadets. Systematic exercises and instruction in sanitation and personal hygiene under the direction of the officers are a part of the daily routine.

The Military Department is the channel through which the authorities of the institution reach and control the entire body of students and each individual student. It seems certain that this system of control is not without many advantages to the cadet himself, and its helpfulness in the administration of the affairs of the College has been demonstrated during many years.

THE COLORS

LIBRARY OF CONGRESS
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